

Food and Drug Administration
Center for Food Safety and Applied Nutrition
Office of Special Nutritionals

ARMS#

12859



6 - MD NOTES

000001

Continued...

000002

Pt. Response **Tolerated well**
 Miscellaneous **CXr to verify placement is pending.**

Note Type: **Shift Nursing Assessment**
 Note Time: **1515 17 Apr 1998**
 Last Stored: **1517 17 Apr 1998**
 Stored by: **[REDACTED]**

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State **Sedated**

NEUROLOGICAL

Location/Orientation **Sedated** Motor Strength **Unable To Assess**
 Pupils **PERRLA** Speech **INTUBATED**

PULMONARY

Respiration **Normal** Chest Wall Expansion **Bilateral And Equal**
 Breath Sounds **Clear Bilaterally**
 X Secretions **SM AMT OF THIN TANISH SECRETIONS**

CARDIOVASCULAR

Heart Sounds **S1, S2** Rhythm **Regular** Ectopy **None**
 All Extremities Warm and Dry **Yes X**
 All Peripheral Pulses Strong and Equal **Yes X**
 Edema **1+ Trace, Disappears Rapidly** JVD **No**

GI

Abdomen **Soft Non-Tender Bowel Sounds Active X 4 Quadrants**
 X Tubes
 #1 **Orogastric** Location **Oral** Draining To **Low Intermittent Suction**
 Draining **Small Amount Brown**
 Irrigation **NONE**

GU

Urine Output **Foley draining Dark Tea Colored Tea Colored** Foley Insert Date **16 APR**

INTEGUMENTARY

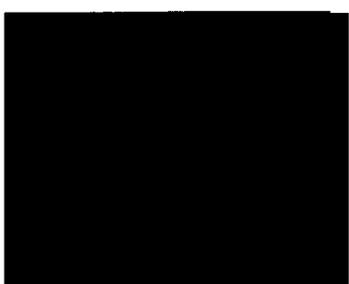
Skin Color **Normal for Race** Skin Temp **Warm & Dry** Integrity **Intact**

LINES

#1 X Periph. Line Location **Right Antecubital** Gauge **18** Insert Date **16 APR**
 Appearance **Site clean and dry, without erythema**
 #2 Periph. Line Location **Right Hand** Gauge **18** Insert Date **16 APR**
 Appearance **Site clean and dry, without erythema**
 #1 X Arterial Line Location **L RADIAL** Insert Date **16 APR**
 Appearance **Clean & dry, without erythema.**

MISCELLANEOUS

Comments **LUNGS ARE CLEAR. O2 SAT 98%. ET TUBE 26CM AT LIP. CURRENT VENT SETTINGS OF AC RATE 12, PEEP 5, FI02 35%, TV800.**



000002

Note Type: Shift Nursing Assessment
Note Time: 1630 17 Apr 1998
Last Stored: 2256 17 Apr 1998
Stored by: [REDACTED]

000003

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State **lethargic**

NEUROLOGICAL

Location/Orientation **Alert Oriented** Motor Strength **RUE RLE LUE LLE Weak**
Pupils **PERRLA** Speech **Clear**
Glasgow Coma Score:
Eyes Open To: **4** Best Motor Response: **6** Best Verbal Response: **5** Glasgow Coma Score: **15**

PULMONARY

Respiration **Normal** Chest Wall Expansion **Bilateral And Equal**
Breath Sounds **Clear With Diminished Bases Bilaterally**
X Secretions **Small Amount Thin**

CARDIOVASCULAR

Heart Sounds **S1, S2** Rhythm **Regular** Ectopy **None**
All Extremities Warm and Dry Yes **X**
All Peripheral Pulses Strong and Equal No **X** See below.
LUE Pulses **Weak**
LLE Pulses **Weak**
RUE Pulses **Weak**
RLE Pulses **Weak**
Edema **Generalized** JVD No **X**

GI

Abdomen **Distended Bowel Sounds Hypoactive**

GU

Urine Output **Foley draining** Foley Insert Date **16apr98**

INTEGUMENTARY

Skin Color **Normal for Race** Skin Temp **Warm & Dry** Integrity **Intact**

LINES

#1 **X** Periph. Line Location **Right Antecubital** Gauge **18** Insert Date **16 apr98**
Appearance **Site clean and dry, without erythema**
#1 **X** Arterial Line Location **Radial** Insert Date **16 apr98**
Apperance **Clean & dry, without erythema.**
#1 **X** Central Line Type **PA Venous Sheath** Location **Right IJ**
Insert Date **16 apr98** Appearance **No redness, tenderness, swelling or drainage at site.**

MISCELLANEOUS

Comments **IV rt. hand, G# 20, dressing clean.**

Note Type: Shift Nursing Assessment
Note Time: 2300 17 Apr 1998
Last Stored: 2318 17 Apr 1998
Stored by: [REDACTED]

000003

SHIFT NURSING ASSESSMENT**101472****PSYCHOSOCIAL**Behavior/Emotional State **lethargic****NEUROLOGICAL**Location/Orientation **Alert Oriented**Motor Strength **RUE RLE LUE LLE Weak**Pupils **PERRLA**Speech **Clear****PULMONARY**Respiration **Normal**Chest Wall Expansion **Bilateral And Equal**Breath Sounds **Clear With Diminished Bases Bilaterally****X** Secretions **Small Amount Thin****CARDIOVASCULAR**Heart Sounds **S1, S2**Rhythm **Regular**Ectopy **None**

All Extremities Warm and Dry

Yes **X**

All Peripheral Pulses Strong and Equal

No **X** See below.LUE Pulses **Weak**LLE Pulses **Weak**RUE Pulses **Weak**RLE Pulses **Weak**Edema **Generalized**

JVD

No **X****GI**Abdomen **Distended Bowel Sounds Hypoactive****GU**Urine Output **Foley draining**Foley Insert Date **16apr98****INTEGUMENTARY**Skin Color **Normal for Race**Skin Temp **Warm & Dry**Integrity **Intact****LINES**#1 **X** Periph. Line Location **Right Antecubital** Gauge **18** Insert Date **16 apr98**Appearance **Site clean and dry, without erythema**#1 **X** Arterial Line Location **Radial** Insert Date **16 apr98**Appearance **Clean & dry, without erythema.**#1 **X** Central Line Type **PA Venous Sheath** Location **Right IJ**Insert Date **16 apr98**Appearance **No redness, tenderness, swelling or drainage at site.****MISCELLANEOUS**Comments **IV rt. hand, G# 20, dressing clean.**

Note Type: **Progress Note**
 Note Time: **2330 17 Apr 1998**
 Last Stored: **0049 18 Apr 1998**
 Stored by: **[REDACTED]**

PROGRESS NOTESource of Entry: **Nursing**Topic of Note: **S/P extubated.****000004**

Continued...

Text of Note:

rec.'d pt. at 1530hr. remains on vent. with FIO2-35%, tv-800, SIMV-12, peep-5. pt. awake but lethargic. Romazicon .2 mgm ivx2 at 1615hr. pt. was Extubated at 1630hr. O2 non RBM, o2sat 93-95%. foley cath. total rec.'d lasix 620 mgm. iv. Chlorothiazide 250 mgm iv at 1930hr. and starting on Bumetanide drip at 4cc/hr. urine out put 70-110 cc/hr. GLUC, 43, serum K+3.2, Crea. 5.3. D50 iv given at 1900hr., kcl 40meq run given as ordered. s/p extubated pt. restless, MS 2 mgm iv given at 2045hr. cont.'d on Bicarb. drip.

Co-signed by: [REDACTED]

Note Type: **Shift Nursing Assessment**
Note Time: **0000 18 Apr 1998**
Last Stored: **0519 18 Apr 1998**
Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State **Participative**

NEUROLOGICAL

Location/Orientation **Alert & Oriented To Person, Place, and Time** Motor Strength **All Extremities Equally Strong**
Pupils **PERRLA** Speech **Clear**
Glasgow Coma Score:
Eyes Open To: **4** Best Motor Response: **6** Best Verbal Response: **5** Glasgow Coma Score: **15**

PULMONARY

Respiration **Normal** Chest Wall Expansion **Bilateral And Equal**
Breath Sounds **Clear Bilaterally**

CARDIOVASCULAR

Heart Sounds **S1, S2** Rhythm **Regular** Ectopy **None**
All Extremities Warm and Dry **Yes X**
All Peripheral Pulses Strong and Equal **No X See below.**
LUE Pulses **Radial Weak**
LLE Pulses **Dorsalis Pedis Weak**
RUE Pulses **Radial Weak**
RLE Pulses **Dorsalis Pedis Weak**
Edema **1+ Trace, Disappears Rapidly** JVD **No X**

GI

Abdomen **Soft Non-Tender Bowel Sounds Active X 4 Quadrants**

GU

Urine Output **Foley draining Amber** Foley Insert Date **16 APR 98**

INTEGUMENTARY

Skin Color **Pale** Skin Temp **Warm & DryCool** Integrity **Intact**

LINES

#1 **X** Periph. Line Location **Right Antecubital** Gauge **18** Insert Date **16 APR**
Appearance **Site clean and dry, without erythema**
#1 **X** Arterial Line Location **L RADIAL** Insert Date **16 APR**

000005

000003

Continued...

	Apperance Clean & dry, without erythema.	
#1 X Central Line	Type PA	Location Right IJ
	Insert Date 16 APR	Appearance No redness, tenderness, swelling or drainage at site. Dressing clean, dry and intact.



000006

Note Type: Shift Nursing Assessment
Note Time: 0000 18 Apr 1998
Last Stored: 0519 18 Apr 1998
Stored by: [REDACTED]

000002

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State **Participative**

NEUROLOGICAL

Location/Orientation **Alert & Oriented To Person, Place, and Time** Motor Strength **All Extremities Equally Strong**
Pupils **PERRLA** Speech **Clear**
Glasgow Coma Score:
Eyes Open To: **4** Best Motor Response: **6** Best Verbal Response: **5** Glasgow Coma Score: **15**

PULMONARY

Respiration **Normal** Chest Wall Expansion **Bilateral And Equal**
Breath Sounds **Clear Bilaterally**

CARDIOVASCULAR

Heart Sounds **S1, S2** Rhythm **Regular** Ectopy **None**
All Extremities Warm and Dry Yes **X**
All Peripheral Pulses Strong and Equal No **X** See below.
LUE Pulses **Radial Weak**
LLE Pulses **Dorsalis Pedis Weak**
RUE Pulses **Radial Weak**
RLE Pulses **Dorsalis Pedis Weak**
Edema **1+ Trace, Disappears Rapidly** JVD No **X**

GI

Abdomen **Soft Non-Tender Bowel Sounds Active X 4 Quadrants**

GU

Urine Output **Foley draining Amber** Foley Insert Date **16 APR 98**

INTEGUMENTARY

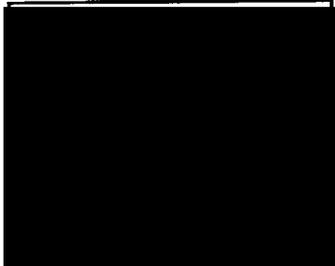
Skin Color **Pale** Skin Temp **Warm & DryCool** Integrity **Intact**

LINES

#1 **X** Periph. Line Location **Right Antecubital** Gauge **18** Insert Date **16 APR**
Appearance **Site clean and dry, without erythema**
#1 **X** Arterial Line Location **L RADIAL** Insert Date **16 APR**
Appearance **Clean & dry, without erythema.**
#1 **X** Central Line Type **PA** Location **Right IJ**
Insert Date **16 APR** Appearance **No redness, tenderness, swelling or drainage at site. Dressing clean, dry and intact.**

Note Type: Shift Nursing Assessment
Note Time: 0400 18 Apr 1998
Last Stored: 0521 18 Apr 1998
Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT



000007

Continued...

PSYCHOSOCIAL

060008

Behavior/Emotional State *Participative*

NEUROLOGICAL

Location/Orientation *Alert & Oriented To Person, Place, and Time* Motor Strength *All Extremities Equally Strong*
Pupils *PERRLA* Speech *Clear*

PULMONARY

Respiration *Normal* Chest Wall Expansion *Bilateral And Equal*
Breath Sounds *Clear Bilaterally*

CARDIOVASCULAR

Heart Sounds *S1, S2* Rhythm *Regular* Ectopy *None*
All Extremities Warm and Dry Yes
All Peripheral Pulses Strong and Equal No See below.
LUE Pulses *Radial Weak*
LLE Pulses *Dorsalis Pedis Weak*
RUE Pulses *Radial Weak*
RLE Pulses *Dorsalis Pedis Weak*
Edema *1+ Trace, Disappears Rapidly* JVD No

GI

Abdomen *Soft Non-Tender Bowel Sounds Active X 4 Quadrants*

GU

Urine Output *Foley draining Amber* Foley Insert Date *16 APR 98*

INTEGUMENTARY

Skin Color *Pale* Skin Temp *Warm & DryCool* Integrity *Intact*

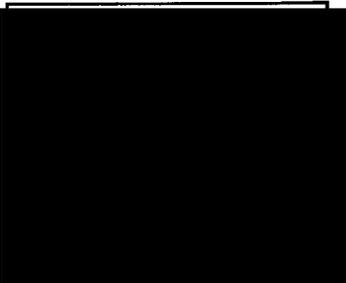
LINES

#1 Periph. Line Location *Right Antecubital* Gauge *18* Insert Date *16 APR*
Appearance *Site clean and dry, without erythema*
#1 Arterial Line Location *L RADIAL* Insert Date *16 APR*
Appearance *Clean & dry, without erythema.*
#1 Central Line Type *PA* Location *Right IJ*
Insert Date *16 APR* Appearance *No redness, tenderness, swelling or drainage at site. Dressing clean, dry and intact.*

Note Type: *Progress Note*
Note Time: *0602 18 Apr 1998*
Last Stored: *0637 18 Apr 1998*
Stored by: [REDACTED]

PROGRESS NOTE

Source of Entry: *Nursing*
Topic of Note: *Progress Note*



000008

Note Type: Progress Note
 Note Time: 1732 16 Apr 1998
 Last Stored: 1744 16 Apr 1998
 Stored by: [REDACTED]

700079

PROGRESS NOTE

Source of Entry: Nursing
 Topic of Note: Progress Note
 Text of Note: PT ARRIVED TO WARD [REDACTED] FROM [REDACTED] AT APROX1730. PT INTUBATED, VENTILATED MECHANICALLY AND SEDATED. IS SHOWING SPONTANEOUS MOVEMENTS. REPORT TAKEN FROM [REDACTED] ER PRIOR TO ARRIVAL.

Note Type: MD Progress Note
 Note Time: 2025 16 Apr 1998
 Last Stored: 2115 16 Apr 1998
 Stored by: [REDACTED]

MD Progress Note

cardiology fellow: 33 yo ad hm who was running pt test and was seen to "slow down" and slump over/become unresponsive. he never became pulseless. pt was brought to er at [REDACTED] and was intubated. pt required sedation/paralysis. ct- for bleed. ecg initially reported as aflutter was later seen to be sinus tach at rate of 180. pt transferred hemodynamically stable. in ccu, pt had bedside echo which showed nl lvfct. urine in foley catheter was seen to be "coca cola" colored and was sent for ua and urine myoglobin. ua showed large amount of blood and 3-4 rbc's. with the suspicion of rhabdomyolysis, his fluids were changed to 1/2ns with 1 amp of hco3- to run at 250cc/h. physical exam was remarkable for bp=122/80 p=110 t=101.2 pupils equal and reactive to light and acccom. neuro: nonfocal. pt woke up and responded to command/pain. neck was without jvd. nl carotid upstrokes without bruits. cv: rr tachy without m,g,r. lungs: cta ext: reportedly painful to touch. soft and pliable. good peripheral pulses. no edema.
 labs: 50% fio2 7.36/31/257
 na=144 k=3.9 cl=111 co2=18 cr=2.8 ca=9 po4=1.7 ck=16,000
 yo hm with rhabdomyolysis and arf after pt test. imp: 33
 vigorous iv hydration with .5 ns with 1 amp bicarb to keep up at approx. 200cc/h. recs:
 watch electrolytes carefully and replace them in the setting of arf.
 watch for signs of compartment syndrome in le's
 treat acidosis

[REDACTED] md.

Note Type: Shift Nursing Assessment
 Note Time: 2259 16 Apr 1998
 Last Stored: 2312 16 Apr 1998
 Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

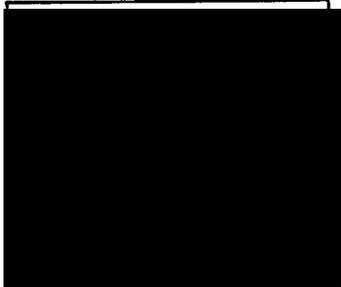
Behavior/Emotional State Sedated

NEUROLOGICAL

Location/Orientation Sedated Motor Strength Unable To Assess
 Pupils PERRLA Speech INTUBATED

PULMONARY

Respiration Normal Chest Wall Expansion Bilateral And Equal
 Breath Sounds Clear Bilaterally



000009

Continued...

X Secretions <i>SM AMT OF THIN TANISH SECRETIONS</i>		
CARDIOVASCULAR		
Heart Sounds <i>S1, S2</i>	Rhythm <i>Regular</i>	Ectopy <i>None</i>
All Extremities Warm and Dry	Yes X	
All Peripheral Pulses Strong and Equal	Yes X	
Edema <i>1+ Trace, Disappears Rapidly</i>	JVD	No X
GI		
Abdomen <i>Soft Non-Tender Bowel Sounds Active X 4 Quadrants</i>		
X Tubes		
#1 <i>Orogastric</i>	Location <i>Oral</i>	Draining To <i>Low Intermittent Suction</i>
Draining <i>Small Amount Brown</i>		
Irrigation <i>NONE</i>		
GU		
Urine Output <i>Foley draining Dark Tea Colored Tea Colored</i>		Foley Insert Date <i>16 APR</i>
X Tubes		
INTEGUMENTARY		
Skin Color <i>Normal for Race</i>	Skin Temp <i>Warm & Dry</i>	Integrity <i>Intact</i>
LINES		
#1 X Periph. Line	Location <i>Right Antecubital</i>	Gauge <i>18</i> Insert Date <i>16 APR</i>
	Appearance <i>Site clean and dry, without erythema</i>	
#2 Periph. Line	Location <i>Right Hand</i>	Gauge <i>18</i> Insert Date <i>16 APR</i>
	Appearance <i>Site clean and dry, without erythema</i>	
#1 X Arterial Line	Location <i>R RADIAL</i>	Insert Date <i>16 APT</i>
	Apperance <i>Clean & dry, without erythema.</i>	
MISCELLANEOUS		
Comments <i>PHARMACOLOGICALLY SEDATED. VSS. TEMP 99.2 DOWN FROM 102.2 AFTER BEING GIVEN TYLENOL. INTUBATED WITH #8 ET TUBE, 26CM MARK AT LIP. SETTINGS: AC RATE 15. PEEP 5, FIO2 40%, TV 800. PEEK AIRWAY PRESSURES CURRENTLY 23.5. PT NOT OVER BREATHING VENT. PT BECAME AGITATED WHILE BEING TURNED AND CLEANED. PULLED IV OUT AND ATTEMPTED TO PULL OUT ET TUBE. GIVEN 3MG BOLUS OF VERSED WHICH CALMED PT DOWN. UA CONTINUES TO BE DARK TEA COLOR BUT APPEARS LIGHTER THAN EARLIER. MABP FROM 75-100. IN SR WITH NO ECTOPY NOTED.</i>		

Note Type: **Shift Nursing Assessment**
Note Time: **0134 17 Apr 1998**
Last Stored: **0138 17 Apr 1998**
Stored by: 

SHIFT NURSING ASSESSMENT	
PSYCHOSOCIAL	
Behavior/Emotional State	<i>Sedated</i>
NEUROLOGICAL	
Location/Orientation	<i>Sedated</i>
Pupils	<i>PERRLA</i>
Motor Strength	<i>Unable To Assess</i>
Speech	<i>INTUBATED</i>
PULMONARY	
Respiration	<i>Normal</i>
Breath Sounds	<i>Clear Bilaterally</i>
X Secretions	<i>SM AMT OF THIN TANISH SECRETIONS</i>

000010

Continued...

All Extremities Warm and Dry	Yes X		
All Peripheral Pulses Strong and Equal	Yes X		
Edema 1+ Trace, Disappears Rapidly		JVD	No X
GI			
Abdomen	Soft Non-Tender Bowel Sounds Active X 4 Quadrants		
X Tubes			
#1 Orogastric	Location Oral	Draining To Low Intermittent Suction	
Draining	Small Amount Brown		
Irrigation	NONE		
GU			
Urine Output	Foley draining Dark Tea Colored	Tea Colored	Foley Insert Date 16 APR
INTEGUMENTARY			
Skin Color	Normal for Race	Skin Temp	Warm & Dry
			Integrity Intact
LINES			
#1 X Periph. Line	Location	Right Antecubital	Gauge 18
	Appearance	Site clean and dry, without erythema	
#2 Periph. Line	Location	Right Hand	Gauge 18
	Appearance	Site clean and dry, without erythema	
#1 X Arterial Line	Location	L RADIAL	Insert Date 16 APR
	Appearance	Clean & dry, without erythema.	
MISCELLANEOUS			
Comments LUNGS ARE CLEAR. O2 SAT 98%. ET TUBE 26CM AT LIP. CURRENT VENT SETTINGS OF AC RATE 12, PEEP 5, FI02 35%, TV800. SWAN INSERTED AT 1300. PLACEMENT CHECKED PER CXR.			

Note Type: **Attending Note**
 Note Time: 0832 17 Apr 1998
 Last Stored: 0841 17 Apr 1998
 Stored by: [REDACTED]

Attending Physician Progress Note

CARDIOLOGY STAFF ON CALL

SEE EXCELLENT NOTE BY DR. [REDACTED] YOUNG ACTIVE DUTY MALE WITH CONSIDERABLE MUSCLE MASS WHO APPARENTLY HAS BEEN FASTING TO MAKE WEIGHT FOR UPCOMING PT TEST WHO COLLAPSED NEAR THE END OF HIGH PROFILE RUN. THERE IS NOTHING TO SUGGEST A CARDIAC ETIOLOGY OR CARDIAC EVENT. PRESUMABLY, HE COLLAPSED SECONDARY TO ACIDOSIS IN THE SETTING OF ACUTE RHABDOMYOLYSIS AND INTRAVASCULAR VOLUME DEPLETION. TREATMENT WILL INCLUDE SUPPORTIVE CARE WITH EXTUBATION AS SOON AS POSSIBLE, URINE ALKALINIZATION AFTER VOLUME REPLETION, AND CAREFUL FOLLOWING OF POTASSIUM, CALCIUM, AND PHOSPHATE LEVELS, AS WELL AS MUSCLE AND NEUROVASCULAR EXAMS TO EXCLUDE COMPARTMENT SYNDROMES. NEPHROLOGY HAS BEEN CONSULTED FOR HIS ACUTE RENAL FAILURE AND ARE FOLLOWING WITH US.

Note Type: **Resp Treatment Note**
 Note Time: 1009 17 Apr 1998
 Last Stored: 1010 17 Apr 1998
 Stored by: [REDACTED]

RESPIRATORY TREATMENT NOTE

Comments: **ETT** pulled back 3cm to 23cm@ lip, SaO2 97% BBS

Note Type: **MD Progress Note**
 Note Time: 1330 17 Apr 1998
 Last Stored: 1414 17 Apr 1998
 Stored by: [REDACTED]



000011

MD Progress Note

Addendum: See H&P

Over first 24hrs, pt actively fluid resuscitated with +14L crystalloid, and Bicarbonate to alkalinize urine, with normalization VS from pulse 170's (presentation) to pulse 90's AbG has improved to 7.324 36.7 98 35% FIO2 SIMV(12). Pt has required replenishment K+, Phos, and bicarbonate. Pt currently receiving 3 amps bicarb in D5W at 250cc/hr, with resultant improvement urine pH 5.5 to 8.0. CK' hav climed from 2-300 to 180K. This AM, pt continues to do well. Anticipate weaning sedation and rapid extubation. Pt at very low risk respiratory compromise requiring reintubation. Pt will need continuous close f/u to ensure urine pH=8, UO>= 200cc/hr +/- loop diuretics now that pt up 14L. Pt benefit from close MD monitoring, esp FEN/CV.

Note Type: Progress Note
Note Time: 1333 17 Apr 1998
Last Stored: 1335 17 Apr 1998
Stored by:

PROGRESS NOTE

Source of Entry:
Topic of Note: Progress Note
Text of Note: INITIAL VISIT Patient intubated. Prayed for patient

Co-signed by:

Note Type: Procedure-Insertion Note
Note Time: 1453 17 Apr 1998
Last Stored: 1501 17 Apr 1998
Stored by:

- PROCEDURE/INSERTION NOTE -

Type IJ introducer and Pa catheter.
Ward:

Performed By: Dr.

Supervised By: Dr.

Informed Consent/Counseling: YES X NO

I have discussed the condition, planned procedure, risks, benefits, alternatives with the patient/surrogate and they have agreed to proceed.

Comment: Written consent signed by pt's wife.

Indications Fluid resuscitation.

Using A/An 9Fr introducer and an 8Fr. PA catheter.

Prep Prepared & draped using aseptic technique

Medications: IV NS and Sodium Bicarb.

Location Right JInternal Jugular.

000012

Continued...

CARDIOVASCULAR			
Heart Sounds <i>S1, S2</i>	Rhythm <i>Regular</i>	Ectopy <i>None</i>	
All Extremities Warm and Dry	Yes X		
All Peripheral Pulses Strong and Equal	Yes X		
Edema <i>1+ Trace, Disappears Rapidly</i>	JVD	No X	
GI			
Abdomen <i>Soft Non-Tender Bowel Sounds Active X 4 Quadrants</i>			
X Tubes			
#1 <i>Orogastric</i>	Location <i>Oral</i>	Draining To <i>Low Intermittent Suction</i>	
Draining <i>Small Amount Brown</i>			
Irrigation <i>NONE</i>			
GU			
Urine Output <i>Foley draining Dark Tea Colored Tea Colored</i>	Foley Insert Date <i>16 APR</i>		
X Tubes			
INTEGUMENTARY			
Skin Color <i>Normal for Race</i>	Skin Temp <i>Warm & Dry</i>	Integrity <i>Intact</i>	
LINES			
#1 X Periph. Line	Location <i>Right Antecubital</i>	Gauge <i>18</i>	Insert Date <i>16 APR</i>
	Appearance <i>Site clean and dry, without erythema</i>		
#2 Periph. Line	Location <i>Right Hand</i>	Gauge <i>18</i>	Insert Date <i>16 APR</i>
	Appearance <i>Site clean and dry, without erythema</i>		
#1 X Arterial Line	Location <i>R RADIAL</i>	Insert Date <i>16 APT</i>	
	Appearance <i>Clean & dry, without erythema.</i>		
MISCELLANEOUS			
Comments <i>CURRENTLY VENT SETTINGS OF AC, RATE 15, PEEP 5, TV 800, P102 35%. EATING >98%. IN ST, NO ECTOPY NOTED WITH MABP OF 104.AVERAGING APROX 100CC/HR OF TEA COLORED UA. UA NOTED TO BE BECOMING LIGHTER. BS TO ABD VERY HYPOACTIVE. ABD APPEARS TO BE MORE DISTENTED. NGT TO LIS WITH RETURN OF BROWNISH SECRETIONS.</i>			

Note Type: **Shift Nursing Assessment**
 Note Time: **0616 17 Apr 1998**
 Last Stored: **0646 17 Apr 1998**
 Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT			
PSYCHOSOCIAL			
Behavior/Emotional State	<i>Sedated</i>		
NEUROLOGICAL			
Location/Orientation	<i>Sedated</i>	Motor Strength	<i>Unable To Assess</i>
Pupils	<i>PERRLA</i>	Speech	<i>INTUBATED</i>
PULMONARY			
Respiration	<i>Normal</i>		
Breath Sounds	<i>Clear Bilaterally</i>		
X Secretions	<i>SM AMT OF THIN TANISH SECRETIONS</i>		
CARDIOVASCULAR			
Heart Sounds <i>S1, S2</i>	Rhythm <i>Regular</i>	Ectopy <i>None</i>	

000013

Continued...

All Extremities Warm and Dry Yes **X**
All Peripheral Pulses Strong and Equal Yes **X**
Edema **1+ Trace, Disappears Rapidly** JVD No **X**

GI

Abdomen **Soft Non-Tender Bowel Sounds Active X 4 Quadrants**
X Tubes
#1 **Orogastric** Location **Oral** Draining To **Low Intermittent Suction**
Draining **Small Amount Brown**
Irrigation **NONE**

GU

Urine Output **Foley draining Dark Tea Colored Tea Colored** Foley Insert Date **16 APR**
X Tubes

INTEGUMENTARY

Skin Color **Normal for Race** Skin Temp **Warm & Dry** Integrity **Intact**

LINES

#1 **X** Periph. Line Location **Right Antecubital** Gauge **18** Insert Date **16 APR**
Appearance **Site clean and dry, without erythema**
#2 Periph. Line Location **Right Hand** Gauge **18** Insert Date **16 APR**
Appearance **Site clean and dry, without erythema**
#1 **X** Arterial Line Location **L RADIAL** Insert Date **16 APR**
Appearance **Clean & dry, without erythema.**

MISCELLANEOUS

Comments **PT RECEIVED 11-12 LITERS OF FLUID LAST NIGHT WITH A LITTLE MORE THAN ONE LITER OUT. LUNGS ARE CLEAR. O2 SAT 98%. ET TUBE 26CM AT LIP. SUCTIONED INFREQUENTLY FOR THIN CL TO TANISH SECRETIONS. CURRRENT VENT SETTINGS OF AC RATE 12, PEEP 5, FI02 35%, TV800. AVERAGING APPROX 115CC UA HR. UA IS CLEARING UP BUT CONTINUES TO HAVE AMBER COLOR. IN SR TO ST WITH UPPER LIMITS OF HR AROUND 110. MABP HAS BEEN AROUND 70-100. NO ECTOPY NOTED. HAS 3+ PULSES TO ALL EXT. EXT ARE SOFT. A LINE CHANGED TO L RADIAL AT 0500. HAD SEVERAL LOOSE WATERY STOOLS.**

Note Type: **Shift Nursing Assessment**
Note Time: **0739 17 Apr 1998**
Last Stored: **1554 17 Apr 1998**
Stored by: **[REDACTED]**

SHIFT NURSING ASSESSMENT

NEUROLOGICAL

Location/Orientation **Sedated** Motor Strength **Unable To Assess**
Pupils **PERRLA** Speech **INTUBATED**
Glasgow Coma Score:
Eyes Open To: **2**

PULMONARY

Respiration **Normal** Chest Wall Expansion **Bilateral And Equal**
Breath Sounds **Clear Bilaterally**
X Secretions **SM AMT OF THIN TANISH SECRETIONS**

CARDIOVASCULAR

Heart Sounds **S1, S2** Rhythm **Regular** Ectopy **None**



000014

Note Type: History & Physical
Note Time: N/A
Last Stored: 0434 17 Apr 1998
Stored by: [REDACTED]

000015

HISTORY AND PHYSICAL EXAMINATION

X Male Age: 33
Service: CARDIOLOGY
Note By: Intern (PGY 1)
Attending Physician: Dr. [REDACTED]
Chief Complaint: Collapse after exercise

History of Present Illness

33 YO BM without known medical hx was running PT test this Afternoon when he was seen by unitmembers to "slow down" at the end of the run, rushed to [REDACTED] ER after slumping down and becoming unresponsive. Pt never lost pulse, but was intubated in [REDACTED] ER for airway management. CT head (-) for bleed. EKG initially felt c/w a-flutter. Transfer to [REDACTED] arranged to r/o cardiac event. On arrival to CCU, pt sedated with Versed (5mg) + paralytic, and intubated. Bedside Echo demonstrated NI LVEF; EKG sinus tach. IV NS 100cc/hr; Foley dark amber urine. Pt awakening with strong limb movements throughout. Hx otherwise not obtainable

PAST MEDICAL HISTORY

Allergies: 0

REVIEW OF SYSTEMS

x Unable To Assess

PHYSICAL EXAMINATION

Exam Date: 0016 17 Apr 1998
Vital Signs: SBP: 131 DBP: 75 BPM: 94
HR: 126 RR: 12 TEMP: 98.4
Wt (kg): 102.00 Ht (cm): 172.72
General Appearance: 33 yo BM intubated moving limbs
Eyes: Perla, conjugate gaze
Chest/Lungs: Equal BS, no Rales, Rhonchi, Wheezes or Rubs
Heart: No gallops, rubs or murmurs, tachycardic
Abdomen: Soft, nontender, normal BS, no organomegaly
Neuro: Moving limbs purposefully, gaze conjugate, facies symmetric
Extremities: No clubbing, cyanosis or edema
Skin: No Lesions, no Petichiae, no Decubiti

DIAGNOSTIC ASSESSMENT & PLAN

#1 Dx: Rhabdomyolysis

Discussion: Pt presents with recent h/o exercise for PT test, now has progressive acute renal failure. DDX includes NSAID nephropathy, and prerenal azotemia. However, entire sx constellation and laboratory findings very supportive of dx. More to follow

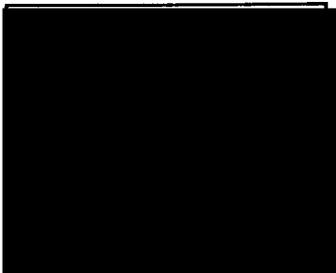
Plan: Manage fluids aggressively with boluses (1000cc/hr+ maintenance IV incl 1-3 amps bicarb in D5W to maintain alkaline urine. Will consider light use diuretics once pt >>5-6L if UO remains minimal

000015

Continued...

000016

SUPERVISING RESIDENT	Name	Dr. [REDACTED]
ATTENDING	Name	Dr. [REDACTED]



000016

Note Type: Resident Admit Note
Note Time: N/A
Last Stored: 1431 17 Apr 1998
Stored by: [REDACTED]

000019

RESIDENT ADMIT NOTE

Male: X
Service: **CARDIOLOGY**
Note By: Dr [REDACTED] Status: [REDACTED] Resident
Chief Complaint: Collapse after exercise

History of Present Illness

This is a 33 yo BM w/ht no sig. past medical history who was in his usual state of excellent health until the day of admission when he collapsed during the APFT. He was finishing his run and was seen to slow down and "topple over" he was brought to the [REDACTED] ER immediately where he was found to be agitated and unresponsive and was intubated for airway protection. He underwent a CT scan of the head which was normal, but was hypotensive and tachycardic and felt to be at risk for a severe arrhythmia and so was A/e by helicopter to [REDACTED] for further eval. He had a blood gas of 7.325/27.7/113, a serum bicarb of <5, a K+ of 4.8 and a serum Ca++ of 10.2 and a UA which showed large blood and no RBC's. On arrival to the CCU he was found to be responsive to voice, intubated, with spontaneous, purposeful movements of all extremities and pupils that were equal bilat. His urine was noted to bright red. His initial CPK was 341. He also underwent a bedside ECHO which showed normal LVFXN.

PAST MEDICAL HISTORY

Adult Illnesses: #1 None
Allergies: 0

FAMILY HISTORY

Family History: #1 No history of exercise intolerance or sickle cell trait.

SOCIAL HISTORY

Tobacco Use: None
Alcohol Use: cocc.
Drug Use: wife denies

PHYSICAL EXAMINATION

Exam Date: 0016 17 Apr 1998
Vital Signs: SBP: 131 DBP: 75 BPM: 94
HR: 126 RR: 12 TEMP: 98.4
Wt (kg): 102.00 Ht (cm): 172.72
General Appearance: Well developed, well nourished male intubated.
Mental Status: Responsive to voice.
Head/Neck: Normocephalic. Supple without masses
Eyes: Ppils equal and reactive bilat.
Ears: Hearing Grossly Normal
Nose/Sinuses: Normal
ET tube in place, og tube in place.
Chest/Lungs: Equal BS, no Rales, Rhonchi, Wheezes or Rubs



000017

Continued...

Heart:	No gallops, rubs or murmurs
Abdomen:	Soft, nontender, normal BS, no organomegaly
Male Genitalia:	normal
Rectal/Prostate:	Normal Tone; Prostate normal size, smooth/sym; Hemoccult negative
Back:	Normal
Pulses:	All pulses 2+ palpable, equal
Neuro:	CN2-12 intact, motor/sensation intact, no pathological reflexes
Skin:	No Lesions, no Petichiae, no Decubiti
LABORATORY AND DIAGNOSTIC DATA	
CHECK BOX FOR:	EKG: X
EKG	
EKG Findings #1 Sinus Tachycardia	
DIAGNOSTIC ASSESSMENT & PLAN	
#1 DX: Acute Exertional Rhabdomyolysis.	
Discussion: This pt showed classic signs of AER--decreased u/o, red urine, MS changes and electrolyte abnormalities such as metabolic acidosis. He presents somewhat atypically, however in that he is Hypokalemic and Hypophosphatemic. This may indicate that he was extremely dehydrated prior to his insult, or that his insult produced such abnormalities which is unusual. He is at increased risk of acute renal failure and complications due to DIC, Compartment syndrome requiring fasciotomy, sudden cardiac death.	
Plan: 1. Vigorous hydration with normal saline. 2. Urine alkalization with sodium bicarb in D5W. 3. Serial CPK, Urine and serum myoglobin, p1, p2 4. Q2 hour UA to manage pH and spec grav. 5. Forced diuresis when volume replete.	

000018

Continued...

LINES

#1 X Periph. Line	Location	Right Antecubital	Gauge 18	Insert Date 16 APR
	Appearance	Site clean and dry, without erythema Swelling		
#2 X Periph. Line	Location	Right Hand	Gauge 18	Insert Date 16 APR
	Appearance	Site clean and dry, without erythema Swelling		
#1 X Arterial Line	Location	Radial	Insert Date 17 APR	
	Appearance	Swollen Dampened		
#1 X Central Line	Type	Venous Sheath	Location	Right IJ
	Insert Date	16 APR 98	Appearance	No redness, tenderness, swelling or drainage at site. Dressing clean, dry and intact.

MISCELLANEOUS

Comments **PT REMAINS MECHANICALLY VENTILATED ON AC RATE OF 10, TV 750, PS 10, PEEP 5, AND FIO2 OF 50 %.** WIFE REMAINS AT THE BEDSIDE.

Note Type: **Attending Note**
 Note Time: **0814 19 Apr 1998**
 Last Stored: **0822 19 Apr 1998**
 Stored by: **[REDACTED] MAJ, MC**

Attending Physician Progress Note

CARDIOLOGY ON CALL STAFF NOTE
 THIS YOUNG ACTIVE DUTY PATIENT HAS TAKEN A SEVERE TURN FOR THE WORSE, DEVELOPING DIC AND FULMINANT LIVER FAILURE. HE NEEDED REINTUBATION EVEN AFTER DIALYSIS WAS INITIATED YESTERDAY. HE IS ALSO BEING SUPPORTED WITH MULTIPLE BLOOD PRODUCTS. AN EMERGENCY MEDICAL BOARD IS BEING INITIATED, AND ALSO THE ORGAN TRANSPLANT SERVICE HAS BEEN CONTACTED FOR CONSIDERATION OF FUTURE LIVER TRANSPLANT. HE WILL BE TRANSFERRED TO THE CRITICAL CARE MEDICINE SERVICE AS IT IS FELT THAT HE WILL RECEIVE BETTER CARE FOR HIS SYSTEMIC INFLAMMATORY RESPONSE SYNDROME WITH MULTISYSTEM ORGAN FAILURE THERE DUE TO STAFFING (PHYSICIAN AND NURSING) ISSUES. WE HAVE DISCUSSED THIS WITH HIS WIFE WHO UNDERSTANDS. SHE COMMUNICATED HIS STRONG DESIRE TO AVOID FUTILE LIFE SUPPORT; HOWEVER, WE ASSURED HER THAT HIS CURRENT CARE IS SUPPORTIVE AND NOT FUTILE AS THERE IS SOME EXPECTATION OF RECOVERY, ALTHOUGH HIS ILLNESS NOW IS LIFE-THREATENING AND EXTREMELY SERIOUS.

Note Type: **Progress Note**
 Note Time: **1021 19 Apr 1998**
 Last Stored: **1038 19 Apr 1998**
 Stored by: **[REDACTED]**

PROGRESS NOTE

Source of Entry: **Nursing**
 Topic of Note: **Transfer In Note**
 Text of Note: **PT. TRANSFERED TO UNIT PER PROTOCOL, CONDITION CRITICAL AND GUARDED. CONTS ON VENT SUPPORT. TO BEGIN DIALYSIS ONCE PT. SET-UP IN UNIT. TO RECIEVE 1UFPF AND 1U CRYOPECIPITATE ASAP THIS A.M. EVAL'D BY ORTHO. MEDICINE, TRANSPLANT, AND NEPHROLOGY. ADMINISTRATIVE CONTINUANCE OF MEDICAL BOARD PAPAER WORK. WILL CONTINUE SERIAL LABS AND OBTAIN ADDITIONAL LABS PER TRANSPLANT FOR POSSIBLE CANDIDATE FOR LIVER TRANSPLANT. CONDITION CRITICAL.**

Note Type: **Shift Nursing Assessment**
 Note Time: **1039 19 Apr 1998**
 Last Stored: **1137 19 Apr 1998**
 Stored by: **[REDACTED]**

000019

Note Type: **Progress Note**
Note Time: **0744 19 Apr 1998**
Last Stored: **0745 19 Apr 1998**
Stored by: [REDACTED]

000020

PROGRESS NOTE

Source of Entry: **Nursing**
Topic of Note: **Progress Note**
Text of Note: **Tolerated ventilator throughout night at 50% I2. Slept most of night awawned to voice. Cooperative.**

Note Type: **Shift Nursing Assessment**
Note Time: **0800 19 Apr 1998**
Last Stored: **1009 19 Apr 1998**
Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State **Sedated**

NEUROLOGICAL

Location/Orientation **Sedated** Motor Strength **Unable To Assess**
Pupils **PERRLA**
Glasgow Coma Score:
Eyes Open To: **3** Best Motor Response: **5** Best Verbal Response: **1** Glasgow Coma Score: **9**

PULMONARY

Respiration **VENTILATED** Chest Wall Expansion **Bilateral And Equal**
Breath Sounds **Clear Bilaterally**

CARDIOVASCULAR

Heart Sounds **S1, S2** Rhythm **Regular** Ectopy **None**
All Extremities Warm and Dry **Yes X**
All Peripheral Pulses Strong and Equal **No X** See below.
LUE Pulses **Doppler**
LLE Pulses **Doppler**
RUE Pulses **Doppler**
RLE Pulses **Doppler**
Edema **Generalized** JVD **No X**

GI

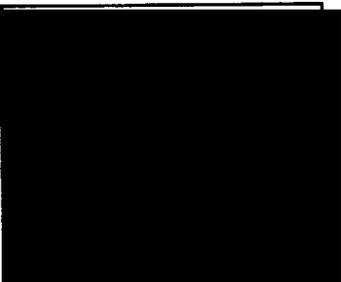
Abdomen **Firm Distended Bowel Sounds Hypoactive**

GU

Urine Output **Foley draining Dark**

INTEGUMENTARY

Skin Color **Normal for Race** Skin Temp **Warm & Dry** Integrity **Intact**



000020

Continued...

Text of Note:

HAS BEEN RESTING QUIETLY AT INTERVALS. VS REMAIN STABLE. SINUS TACH. NO ECTOPY. CONTINUES ON BUMAX AT 4CC/HR+BICARB DRIP AT 100CC/HR. FOLEY IS TO GRAVITY DRAINAGE. URINE OUTPUT 60-80CC/HR. O2 WAS CHANGED TO 6L NP AT MW. O2 SATS 94-97%. LUNGS CLEAR. STILL HAS 1+EDEMA OF ARMS, HANDS, FEET AND LEGS. REMAINS ALERT AND ORIENTED. TAKING CLEAR LIQ WELL. C/O CONSTIPATION. DULCOLAX SUPPOS X1 GIVEN. HAS HAD 2 LIQ BM'S SMALL G+. HAS PASSED MUCH GAS. WIFE AT BEDSIDE. WILL CONTINUE PRESENT PLAN OF CARE.

Co-signed by:

Note Type: MD Progress Note
Note Time: 0703 18 Apr 1998
Last Stored: 0738 18 Apr 1998
Stored by:

MD Progress Note

Intern Cross Cover Note

The cross cover team extubated Mr [redacted] at about 1600 yesterday secondary to excellent oxygenation and minimal ventilatory support. Post extubation he required 100% non-rebreather face mask, but through the course of the evening, he was able to be weaned to nasal cannula. Several ABG's were drawn which showed pure metabolic acidosis with appropriate respiratory compensation (7.29/25/80's)

Over the course of the day yesterday, he was about 20,000 cc + on fluid. CXR post extubation was consistent with worsening pulmonary edema/volume overload. However, his urine output was insufficient to deal with all of this fluids (about 70-100 cc/hour). Lasix was given, initially at 40 mg IV, then 80 mg, 160 mg and 320 mg. Because of the volume required in giving lasix, he was switched over to a Bumex drip (about 4 cc fluid / hour). Serial P1 throughout the PM were checked which showed progressive increases in the Cr (up to 6.3 on last check) consistent with ARF associated this rhabdo and ATN.

From a cardiac standpoint, a Swan was placed to assist with volume status especially in this patient who had received so much fluid over the day. CO 9.7 with SVR 699 consistent with possible SIRS physiology. He remained tachycardic overnight, though his pressures were stable.

His CBC last PM showed thrombocytopenia with plt 42 but a normal HCT. This was confirmed on serial CBC each showing plds in the 40's but with stable HCT (around 45). A Coag II panel was sent which showed PT 56 (INR 14.7), PTT 54, TT 27, and fibrinogen 120 (Low). This was consistent with DIC which has been known to occur with pts in rhabdo. He showed no clinical evidence of bleeding (though guaiac + stool non-melanin/non-hematochezia). His peripheral blood smear was reviewed and was notable for FEW schistocytes, but 22% bandemia/left shift. As he had no evidence of MAHA and no clear infectious source and his rhabdo most likely was stimulating an inflammatory response, we felt no "empiric" antibiotics were called for to treat infection/sepsis.

[redacted] MD
Internal Medicine

Note Type: Shift Nursing Assessment
Note Time: 0800 18 Apr 1998
Last Stored: 1014 18 Apr 1998
Stored by:

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State Participative

NEUROLOGICAL

Location/Orientation	Alert & Oriented To Person, Place, and Time	Motor Strength	All Extremities Equally Strong
Pupils	PERRLA	Speech	Clear

000021

Continued...

Glascow Coma Score:

Eyes Open To: 4 Best Motor Response: 6 Best Verbal Response: 5 Glasgow Coma Score: 15

PULMONARY

Respiration **Rapid** Chest Wall Expansion **Bilateral And Equal**
Breath Sounds **clear with mid rales**

CARDIOVASCULAR

Heart Sounds **S1, S2** Rhythm **Regular** Ectopy **None**
All Extremities Warm and Dry Yes **X**
All Peripheral Pulses Strong and Equal No **X** See below.
LUE Pulses **Doppler**
LLE Pulses **Doppler**
RUE Pulses **Doppler**
RLE Pulses **Doppler**
Edema **Generalized** JVD Yes **X**

GI

Abdomen **Soft Non-Tender Bowel Sounds Active X 4 Quadrants**

GU

Urine Output **Foley draining Dark** Foley Insert Date **16 APR**

INTEGUMENTARY

Skin Color **Normal for Race** Skin Temp **Cool** Integrity **Intact**

LINES

#1 **X** Periph. Line Location **Right Antecubital** Gauge **18** Insert Date **16 APR**
Appearance **Site clean and dry, without erythema**
#2 **X** Periph. Line Location **Right Hand** Gauge **18** Insert Date **16 APR**
Appearance **Site clean and dry, without erythema**
#1 **X** Arterial Line Location **Radial**
Appearance **Clean & dry, without erythema.**
#1 **X** Central Line Type **Venous Sheath** Location **Right IJ**
Appearance **No redness, tenderness, swelling or drainage at site. Dressing clean, dry and intact.**

MISCELLANEOUS

Comments **Pt only has complaints of generalized muscle soreness. Resps are rapid. Very thirsty- pt taking in juice. Staff limiting visitors to 2 every two hrs and for 15 minutes only- per wife.**

Note Type: **MD Progress Note**
Note Time: **1130 18 Apr 1998**
Last Stored: **1347 18 Apr 1998**
Stored by: **[REDACTED]**

MD Progress Note

000022

Continued...

Pt 33 yo BM admitted 16 APR for Rhabdomyolysis after finishing run for PT test.

Pt has had very eventful 24 hr course. See also cross cover MD note. extubated about 1600 yest afternoonn with good subsequent resp fx (pt weaned from NRB to NC over PM) central line placed Right IJ for central monitoring (CO 9.7 SVR 699 See system breakdown

NEURO

Pt alert, conversant, oriented today. Sedation weaned yesterday AM prior to intubation. No decrement in MS or Neuro functioning

RESP

Post extubation ABG 7.29/25/80's 100%FM. ABG this AM 7.253/28.2/109 NC RR low 18-24

Exam will need repeating. Pt moving too much while trying to maintain sitting position CXR- bilat pleural effusions, IJ line in SVC, c/w volume overload

Will need to monitor respiratory fx closely. No signs imminent trouble, but volume status concerning for worsening pulmonary edema

CV

HR 110's-120's up from 90's prior day
110'0'-140's/40's-70's
CO 10's L/min SVR high 500- low 600's PCWP 21-24
RRR, rapid rate. No murmurs

Monitor PCWP regularly for furhter volume overload. Low SVR concerning for sepsis like state, but would expect much lower PCWP. Have discussed dialysis with Nephro for volume reduction; Will decide on course once labs back.

HEME/COAG

PT >65/PTT 58.9 INR 20 Fibrin 109 TT 30.3
CBC 28.2>44.1< pending (last in 40's)

No evidence clot/hemorrhage on exam. CBC smear with few schistocytes Probable DIC d/t Rhabdomyolysis - Plan to follow Coag II panel on q6 basis with FFP to partially correct PT. Understand that giving FFP to pt's in DIC presents theoretical risk further consumption. Pt will need further factor support if bleeding develops. Plan to discuss with Heme/Onc.

FEN

pt >+20L past 24 hrs. with UO 50-150 cc/hr despite fluids/diuretics
P1 138/4.4/109/16/37/8.4/115
p2 PO4 6.5 TP4.2 alb-2.0 PO4 7.1
UA 1.009 pH 5.0 protein >300 small blood

creatinie continues to rise. Will await Nephro intervention. Anticipate pt will need dialysis for 2-5 days, before kidneys begin to recover.

GI - 1 heme pos stool.

Abd NT +bowels sounds. No guarding/rebound this AM
AST 6918 ALT 3231 T bili 3.7 (D-1.6)

Pt at risk for GIB d/t consumptive coagulopathy. Liver fx elevation probably d/t "shock liver" with insult occurring, most likely, while volume depleted. Hyperbilirubinemia 45% unconjugated. Will follow liver fx. Lab parameters of synthetic capability more difficult to follow, as coagulant proteins involved in hyperconsumption. Albumin likely lost early in course (along with myoglobin), the diluted by 20L volume infusion.

ID - Pt had temp 101 yesterday afternoon (1600), but has remained afebrile since. No known source of infx. Pt has 1 prior febrile episode. Feel this is d/t primary dz process (Rhabdo). Will continue to follow. Plan empiric rx aspiration pneumonia from LOC event/intubation.

MUSCULOSKEL- PE reveals diffuse soft tissue edema increased sine fluid boluses begun. + palpable peripheral pulses. Muscular compartments more turgid, but still perfusing, and nontender. Will continue to monitor for compartment syndrome. Will notify ortho.

000023

Note Type: Shift Nursing Assessment
Note Time: 1146 18 Apr 1998
Last Stored: 1156 18 Apr 1998
Stored by: [REDACTED]

000033

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State **Participative**

NEUROLOGICAL

Location/Orientation **Alert & Oriented To Person, Place, and Time** Motor Strength **All Extremities Equally Strong**
Pupils **PERRLA** Speech **Clear**
Glascow Coma Score:
Eyes Open To: **4** Best Motor Response: **6** Best Verbal Response: **5** Glascow Coma Score: **15**

PULMONARY

Respiration **Rapid** Chest Wall Expansion **Bilateral And Equal**
Breath Sounds **rales throughout**

CARDIOVASCULAR

Heart Sounds **S1, S2** Rhythm **Regular** Ectopy **None**
All Extremities Warm and Dry Yes **X**
All Peripheral Pulses Strong and Equal No **X** See below.
LUE Pulses **Doppler**
LLE Pulses **Doppler**
RUE Pulses **Doppler**
RLE Pulses **Doppler**
Edema **Generalized** JVD Yes **X**

GI

Abdomen **Soft Non-Tender Bowel Sounds Active X 4 Quadrants**

GU

Urine Output **Foley draining Dark** Foley Insert Date **16 APR**

INTEGUMENTARY

Skin Color **Normal for Race** Skin Temp **Cool** Integrity **Intact**

LINES

#1 **X** Periph. Line Location **Right Antecubital** Gauge **18** Insert Date **16 APR**
Appearance **Site clean and dry, without erythema**
#2 **X** Periph. Line Location **Right Hand** Gauge **18** Insert Date **16 APR**
Appearance **Site clean and dry, without erythema**
#1 **X** Arterial Line Location **Radial**
Apperance **Clean & dry, without erythema.**
#1 **X** Central Line Type **Venous Sheath** Location **Right IJ**
Insert Date **17 APR** Appearance **No redness, tenderness, swelling or drainage at site. Dressing clean, dry and intact.**

MISCELLANEOUS

Comments **Continues to have generalized muscle soreness. Rales in mid lobes of lungs increasing. Dr notified.**

000024

Note Type: MD Progress Note
Note Time: 1342 18 Apr 1998
Last Stored: 1506 18 Apr 1998
Stored by: [REDACTED]

000050

MD Progress Note

ICU fellow note:

Asked to see the patient by the CCU team. Patient seen, examined, chart, labs and CXRs reviewed. 33 year-old man who relates a two week history of severe dieting and over the counter diuretics in order to make the Army weight standard. After the run portion of his PT test on 4/17/98. He collapsed to the ground, lost consciousness, and was taken emergently to the [REDACTED] ER. He was minimally arousable and intubated to protect his airway. Initial work-up showed an elevated CPK. He was transferred to the CCU for cardiac evaluation. Work-up and exam in the CCU was more consistent with rhabdomyolysis. He was extubated easily. His current issues now are rhabdomyolysis with acute renal failure, elevated WBC with bandemia, elevated LFTs and coagulopathy. PA catheter numbers show hyperdynamic physiology.

RECOMMENDATIONS;

- initiation of hemodialysis today for his severe acidosis and volume overload
- correction of electrolyte abnormalities
- q6 Coag II panels with FFP for PT > 16, Cryoprecipitate for fibrinogen less than 100,
- CBC BID and transfuse platelets less than 20,000
- unasyn for aspiration pneumonia
- ortho consult to assess for compartment syndrome
- will follow with you.
- would also agree to [REDACTED] transfer

Note Type: MD Progress Note (Hematology/Oncology Service)
Note Time: 1351 18 Apr 1998
Last Stored: 1456 18 Apr 1998
Stored by: [REDACTED]

MD Progress Note

000025

Continued...

Pt is a 33 yold AA male with no significant PMH who was admitted to the CCU on 4/16 after he had collapsed during the APFT. The pt had apparently been crash dieting for the PT test and collapsed at the end of the run. He was noted to be unresponsive and agitated and was intubated for airway control. After transfer to ER he was noted to have tachycardia with rate of 180 at first felt to be a-flutter but later identified as sinus tach. After transfer to [REDACTED] he was noted to have gross myoglobinuria, metabolic acidosis, acute renal insufficiency and elevated CPK all c/w acute exertional rhabdomyolysis. The pt reports no Hx of sickle cell trait. Pt was treated with aggressive iv fluid hydration with alkalinization of urine. He was extubated yesterday and his MS has been fine. Also c/w acute rhabdo he has manifested hypocalcemia and hyperphosphatemia. He has shown progressive coagulopathy and thrombocytopenia since admission; baseline determinations were normal. We are asked to evaluate and make treatment recommendations regarding this problem. Today he is being dialyzed (citrate-based anticoagulation) for fluid overload and acidosis.

4/16: WBC=21.7 H/H=16.6/51.7 PLT=206 ; PT/PTT=12.3/24.2
4/17 WBC=22.5 H/H=16.0/46.6 PLT=47 ; PT/PTT=51.1/56.6 fibrinogen = 127
4/18 WBC=28.2 H/H=15.9/45.1 PLT=52 ; PT/PTT>65/78.7 fibrinogen = <100

Examination of blood smear from today reveals burr cells and schistocytes c/w MAHA

Concurrently he has also shown progressive transaminase elevation, today ALT = 3231, AST = 6918, Tbili = 3.7. His albumin is also depressed at 1.9.

Imp:

1) The pt has evidence of two concurrent coagulopathies related to inciting event:

A) Acute Disseminated Intravascular Coagulation

This process has been described after acute muscle injury and is induced by massive release of tissue thromboplastin activating the coagulation cascade leading to the consumption of factors leading to prolonged PT, PTT, TT and depleted fibrinogen associated with thrombocytopenia (platelets get caught in fibrin mesh) and MAHA (red cells damaged by fibrin mesh). The pt has all of these present. This entity is treated primarily by treating the underlying disease. In event of bleeding, perceived high risk for bleeding, or an invasive procedure (Quinton cath placement as in this pt), factor and fibrinogen replacement is indicated. PLT replacement is also indicated as needed for bleeding or PLT < 20K. The presence of nl coag studies initially make the consideration of a baseline coagulopathy such as the presenece of an inhibitor untenable. The fear that factor and fibrinogen replacement worsens the situation by adding "fuel to the fire" has not been borne out. Indeed, plasma contains natural antithrombotic substances (Prot S, Prot C)

B) Acute factor deficiency due to decreased synthetic function from the acute hypotensive insult to the liver (shock liver). This is manifested by prolonged PT, PTT, TT and suggested in this pt by the high ALT, AST and decreased albumin. This entitiy is clearly treated by factor replacment.

Rec:

- 1) agree with screen for sickle cell trait and [REDACTED] def as you have done (pending)
- 2) baseline D-Dimer and FSP determiantion
- 3) retic count with next CBC
- 4) a) repletion of factors with FFP at 10 ml/kg; follow PT with target value of within 5 sec of normal.
b) repletion of fibrinogen with cryoprecipitate at 10 units per every 2 to 3 units of FFP used.
c) PLT transfusions for any bleeding, or PLT < 20K.
- 5) agree with Ortho evaluation to consider watch for fasciitis and do fasciotomy as needed.

Thanks, we will follow with you. Case discussed with Drs. [REDACTED] and [REDACTED] Heme/Onc staff and Coagulation Specialist). We will discuss this case with other area coag specialists.

[REDACTED] Hematology/Oncology Service

Note Type: [REDACTED] Attending Note
Note Time: 1500 18 Apr 1998
Last Stored: 1501 18 Apr 1998
Stored by: [REDACTED]

Attending Physician Progress Note

000026

Continued...

Hematology Attending
Patient seen and discussed with Dr. [redacted] Agree with plan outlined in his note. In absence of procedure, need for replacement therapy (i.e. FFP/cryoprecipitate) less certain. Will follow with you. [redacted] M.D.

Note Type: Shift Nursing Assessment
Note Time: 1621 18 Apr 1998
Last Stored: 1623 18 Apr 1998
Stored by: [redacted] 1LT AN

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State **Participative**

NEUROLOGICAL

Location/Orientation **Alert & Oriented To Person, Place, and Time** Motor Strength **All Extremities Equally Strong**
Pupils **PERRLA** Speech **Clear**
Glasgow Coma Score:
Eyes Open To: **4** Best Motor Response: **6** Best Verbal Response: **5** Glasgow Coma Score: **15**

PULMONARY

Respiration **Rapid** Chest Wall Expansion **Bilateral And Equal**
Breath Sounds **rales throughout**

CARDIOVASCULAR

Heart Sounds **S1, S2** Rhythm **Regular** Ectopy **None**
All Extremities Warm and Dry **Yes X**
All Peripheral Pulses Strong and Equal **No X See below.**
LUE Pulses **Doppler**
LLE Pulses **Doppler**
RUE Pulses **Doppler**
RLE Pulses **Doppler**
Edema **Generalized** JVD **Yes X**

GI

Abdomen **Soft Non-Tender Bowel Sounds Active X 4 Quadrants**

GU

Urine Output **Foley draining Dark** Foley Insert Date **16 APR**

INTEGUMENTARY

Skin Color **Normal for Race** Skin Temp **Cool** Integrity **Intact**

LINES

#1 **X** Periph. Line Location **Right Antecubital** Gauge **18** Insert Date **16 APR**
Appearance **Site clean and dry, without erythema**
#2 **X** Periph. Line Location **Right Hand** Gauge **18** Insert Date **16 APR**
Appearance **Site clean and dry, without erythema**
#1 **X** Arterial Line Location **Radial**
Appearance **Clean & dry, without erythema.**
#1 **X** Central Line Type **Venous Sheath** Location **Right IJ**

000027

Continued...

Insert Date 17 APR	Appearance <i>No redness, tenderness, swelling or drainage at site. Dressing clean, dry and intact.</i>
--------------------	---

Note Type: MD Progress Note
 Note Time: 1922 18 Apr 1998
 Last Stored: 1927 18 Apr 1998
 Stored by: [REDACTED]

MD Progress Note	
<p>Called to emergently intubate patient secondary to acute resp distress and SaO2 in mid 80's. Pt pre-oxygenated with 100% O2 via face mask until sat mid 90's. With cricoid pressure applied, 20mg etomidate, 120mg succinylcholine given iv. Patient intubated with 8ETT with MAC 4 blade (grade 1 view). Tube secured at 23cm at teeth with bilateral breath sounds and end-tidal CO2. Hemodynamics at baseline throughout. [REDACTED] MD (anesthesia)</p>	

Note Type: Progress Note
 Note Time: 1934 18 Apr 1998
 Last Stored: 1944 18 Apr 1998
 Stored by: [REDACTED]

PROGRESS NOTE	
Source of Entry:	Nursing
Topic of Note:	Progress Note
Text of Note:	<p>Towards the end of dialysis- approx 1800, Pt began to get more tachypneic and more tachycardic. Pressures dropped down to 70-80 systolic -briefly and rose again to 150's systolic. Pt continued to have difficulty breathing and was subsequently intubated. Due to possible blood product transfusion reaction- this incident happened just after unit of platelets finished-- reaction paperwork and lab samples sent.</p>

Note Type: Shift Nursing Assessment
 Note Time: 1945 18 Apr 1998
 Last Stored: 2116 18 Apr 1998
 Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT			
PSYCHOSOCIAL			
Behavior/Emotional State	Sedated		
NEUROLOGICAL			
Location/Orientation	Does Not Follow Commands	Motor Strength	Unable To Assess
Pupils	Sluggish	Speech	intubated
Glasgow Coma Score:			
Eyes Open To: 1 Best Motor Response: 1			
PULMONARY			
Respiration	intubated		
Breath Sounds	Clear Bilaterally		
Chest Wall Expansion	Bilateral And Equal		
CARDIOVASCULAR			
Heart Sounds	S1, S2	Rhythm	Regular
		Ectopy	None



000028

Note Type: Progress Note
Note Time: 1104 19 Apr 1998
Last Stored: 1106 19 Apr 1998
Stored by: [REDACTED]

PROGRESS NOTE

Source of Entry: OTS
Topic of Note: Progress Note
Text of Note: Pt seen with Dr. [REDACTED] consult in chart and Dr [REDACTED] note in [REDACTED].

Note Type: MD Progress Note (Hematology/Oncology Service)
Note Time: 1223 19 Apr 1998
Last Stored: 1242 19 Apr 1998
Stored by: [REDACTED]

MD Progress Note

EVENTS OF PAST 24 HOURS NOTED. PT BECAME MARKEDLY HYPOTENSIVE AND HAD ACUTE RESPIRATORY FAILURE AT END OF DIALYSIS. CURRENTLY HIS OXYGENATION STATUS HAS IMPROVED AND THE ETIOLOGY OF RESPIRATORY FAILURE AND CXR INFILTRATES THOUGHT TO BE EITHER FLUID OR PERHAPS HEMORRHAGE. HE IS ALSO ON EMPIRIC ANTIBIOTICS IN EVENT THIS WAS ASPIRATION PNEUMONIA. ALSO HE CURRENTLY SHOWS EVIDENCE OF COMPARTMENT SYNDROME AND PT BEING GETTING READY FOR OR FOR FASCIOTOMY. HIS LIVER DYSFUNCTION AND UREMIA HAVE BECOME MORE MANIFEST AND THERE IS SUSPICIAN HE MAY HAVE HEPATORENAL SYNDROME. AN EMERGENT MEB HAS BEEN INITIATED AND THE TRANSPLANT SERVICE HAS BEEN CONTACTED REGARDING THE POSSIBILITY OF EMERGENT TRANSFER TO GET LIVER TRANSPLANT.

COAGS IMPROVED WITH FFP AND CRYO REPLACEMENT. TODAY PT = 27, PTT = 36, FIBRINOGEN = 294, TT = 24.7 THE CIRCULATING D-DIMERS ARE ANTICOAGULANTS AND ACTING TO PROLONG TT. HIS H/H SHOW DECLINE SOME OF WHICH MAY BE RELATED TO DIALYSIS AND THE DISEASE PROCESS. NO EVIDENCE OF OTHER BLEEDING AT THIS POINT.

HE HAS EVIDENCE OF COAGULAPATHIES FROM SHOCK LIVER WITH CONCURRENT ACUTE DIC AS DISCUSSED YESTERDAY. WOULD CONINUE REPLACEMENT WITH FFP, CRYO AND PLTS AS IS BEING DONE, AS PER OUR LAST NOTE. CONCUR WITH FASCIOTOMY. HE HAS NOT BEEN UREMIC VERY LONG SO IT IS UNLIKELY HE HAS SIGNIFICANT QUALITATIVE PLT DYSFUNCTION YET, HOWEVER, IF THERE IS CONCERN, DDAVP MAY BE ADMINISTERED.

Note Type: [REDACTED]tending Note
Note Time: 1232 19 Apr 1998
Last Stored: 1258 19 Apr 1998
Stored by: [REDACTED]

Attending Physician Progress Note

000029

SHIFT NURSING ASSESSMENT

000030

PSYCHOSOCIALBehavior/Emotional State *Sedated***NEUROLOGICAL**Location/Orientation *WILL AWAKEN TO VERBAL AND PHYSICAL STIMULI* Motor Strength *Flaccid Unable To Assess*Pupils *PERRLA* Speech *INTUBATED*

Glasgow Coma Score:

Eyes Open To: *3* Best Motor Response: *1* Best Verbal Response: *1* Glasgow Coma Score: *5***PULMONARY**Respiration *CONTS ON VENT SUPPORT WITH [REDACTED] Chest Wall Expansion Bilateral And Equal*
*50%;AC;PEEP 5 ; TV 750*Breath Sounds *Clear With Diminished Bases Bilaterally*X Secretions *None***CARDIOVASCULAR**Heart Sounds *S1, S2* Rhythm *Regular-SINUS TACHY* Ectopy *None*All Extremities Warm and Dry Yes *X*All Peripheral Pulses Strong and Equal No *X* See below.LUE Pulses *Radial Weak*LLE Pulses *Popiteal Absent; UNABLE TO PALPATE-NO AUDIBLE SOUND PER DOPPLER; TESTING FOR COMPARTMENT SYNDROME BY ORTHO PHYSICIAN*RUE Pulses *Radial Weak*RLE Pulses *Popiteal Weak; AUDIBLE PER DOPPLER AND PALPTION*Edema *Generalized* JVD No *X***GI**Abdomen *Taut Firm Distended Bowel Sounds Hypoactive***GU**Urine Output *Foley draining Tea Colored* Foley Insert Date *18 APRIL 98***INTEGUMENTARY**Skin Color *Normal for Race* Skin Temp *Warm & Dry* Integrity *Intact***LINES**#1 *X* Periph. Line Location *Right Forearm Antecubital* Gauge *20 20* Insert Date *18 APRIL 98*Appearance *Site clean and dry, without erythema*#1 *X* Arterial Line Location *Radial* Insert Date *18 APRIL 98*Apperance *Clean & dry, without erythema.*#1 *X* Central Line Type *PA* Location *Right IJ*Insert Date *18 APRIL 98* Appearance *No redness, tenderness, swelling or drainage at site.***MISCELLANEOUS**Comments *CHECKING FOR COMPARTMENT SYNDROME; TO GO FOR C.T. SCAN OF HEAD; POSSIBLE O.R. TO RELIEVE SYNDROME (PENDING).*

000030

Continued...

We have accepted this critically ill gentleman onto our service this morning for continuing care of his rhabdomyolysis, now complicated by acute/fulminant hepatic failure. Current active issues are as follows:

NEURO: Currently sedated. Will D/C these in order to follow neurologic status, given risk for intracranial hemorrhage, as well as cerebral edema secondary to his hepatic failure. IF further sedation is needed, we plan to use remifentanyl in order to allow for rapid reversal. His ammonia earlier today was 53. We will treat with lactulose and follow levels closely. We plan to repeat his head CT within the hour, and neurosurgery has been consulted should the need for ICP monitoring arise.

PULM: He required re-intubation last evening, with diffuse alveolar infiltrates. This was in the face of a low PCWP, suggesting ARDS or alveolar hemorrhage. This morning he is oxygenating well with minimal support and excellent compliance, suggesting the latter as the etiology of his infiltrates. Will hold on FOB/BAL today as this will not change our management. Will continue Unasyn for empiric aspiration coverage (would like to avoid imipenem given risk for seizure).

HEME: Currently extremely coagulopathic...?DIC vs hepatic failure. The relative preservation of platelets would favor the latter. Will support with FFP/cryo as needed and attempt to normalize coags.

RENAL: Currently being hemodialyzed intermittently secondary to acidosis and hyperkalemia. Volume is less of an issue today, though will aim to take off another liter to allow for blood product support. If volume (and/or phos and K) become more of an issue today, may switch to CVVHD. Will check K today post dialysis and add kayexalate as needed. Will continue bicarb in IVF for now and monitor acid-base status closely.

GI: Fulminant hepatic failure. Will monitor neuro and coag status as above. Transplant service has been consulted. May require both liver and kidney transplant. His hepatic failure has also been complicated by severe hypoglycemia. Will continue D10 and follow glucose levels closely.

EXT: Both LE noted to be extremely tight this morning, much worse than yesterday. Have consulted orthopedics...deep posterior compartment on the left has an elevated pressure to 70 and will likely require release today. This will obviously increase our need for blood product support.

ID: Currently afebrile. Question aspiration at the time of initial intubation...will therefore continue unasyn at renal dose and follow closely.

DISPO: Wife has been present throughout and very cooperative. She is up to date on his status and understands our plan for the day. He has been medically retired as of 1045 this morning. His company commander has been here today and is aware of the situation.

Note Type: MD Progress Note (Nephrology Fellow)
Note Time: 1330 19 Apr 1998
Last Stored: 1402 19 Apr 1998
Stored by: [REDACTED]

MD Progress Note

000031

Continued...

Nephrology Fellow

Events overnight: worsening acidemia with stable oxygenation. Hypotension requiring low-dose pressor support. MEB dictated. Transferred to MICU. Evaluation by OTS for possible liver transplant--felt to be currently stable but following. Evaluation by Orthopedics showing elevated pressures in L calf c/w compartment syndrome. Evaluation by Neurosurgery for possible elevated ICP. Current plans for non-contrast head CT, then to OR this p.m.

IMP

- oliguric acute renal failure
- compartment syndrome
- metabolic acidosis
- hyperkalemia, hyperphosphatemia
- acute liver failure
- coagulopathy
- ventilatory dependence

REC

- HD today x 4 hrs for potassium and bicarbonate control, with 1 liter volume removal.
- follow K, bicarb, Ca q 2-3 hrs
- Kayexalate 25-50 gms po in lactulose prn
- amphogel 30 cc per ng tid
- OR recs: no use of K-containing fluids (i.e., lactated Ringer's), no succinylcholine. Careful monitoring of K and bicarb with insulin and gluces drips readily available.
- will reassess post-OR for indications for continuous renal replacement therapy

Nephrology Service

Note Type: Progress Note
Note Time: 1351 19 Apr 1998
Last Stored: 1400 19 Apr 1998
Stored by: [REDACTED]

PROGRESS NOTE

Source of Entry: Nursing
Topic of Note: Progress Note
Text of Note: FOUR HOUR HD TX DONE. ONE LITER REMOVED FROM PT. TX WAS HEPARIN FREE VSS THROUGHOUT TX. STAT P1 DRAWN X3 THROUGHOUT TX. QUINTIN CATH PACKED WITH NS. 1.2CC ARTERIAL, 1.3CC VENOUS. REPORT GIVEN TO MICU NURSE.

Note Type: Progress Note
Note Time: 1701 19 Apr 1998
Last Stored: 1759 19 Apr 1998
Stored by: [REDACTED]

PROGRESS NOTE

Source of Entry: Nursing
Topic of Note: ALTERATION IN HEMODYNAMICS

000032

Continued...

Text of Note:

PT DIALYZED AND HAD 1 LITER FLUID REMOVED;NO ADVERSE REACTIONS DURING DIALYSIS. ABLE TO MAINTAIN BLOOD PRESSURE;TITRATED DOPAMINE TO OFF WHILE ON DIALYSIS. EVALUATED BY ORTHO FOR CARPAL TUNNEL SYNDROME IN RIGHT AND LEFT LOWER LEGS AND THIGH. ABLE TO MAINTAIN SBP BETWEEN 120-170MMHG. CONT'D TO BE IN SINUS TACHY WITH HEART RATE OF 110-120/MIN WITHOUT ECTOPY. TRANSPORTED TO C.T.SCAN FOR EVAL OF HEAD;NO UNUSUAL IMAGEDRY EVIDENT. PLAN OF CARE IS TO MONITOR LYTES;SPECIFICALLY K+ AND TO REDIALYZED THIS P.M. TAKEN TO O.R. FOR FASCIATOMY OF BILATERAL LOWER LOBES;CONDITION CRITICAL.

Note Type: MD Progress Note (INTERN ACCEPT NOTE)
Note Time: 1713 19 Apr 1998
Last Stored: 1949 19 Apr 1998
Stored by: [REDACTED]

MD Progress Note

INTERN ACCEPT NOTE

Please refer to resident transfer note fro more complete hospital course.

Pt is a 33yo AAM s any known medical/surgical hx. who developed AER after taking over the counter "natural diuretics" and starving himself prior to his APFT. Pt lost 17lbs in 2wks and did not eat for 2-3days prior to his PT test. Pt then proceeded to develop AER folowing his 2mi.run.

Pt was transferred to MICU this am. Pt initiated on HD for inc.K+>5 and anuria.

Pt to go to CT scan for non-con of the head prior to going to OR to eval for edema/hydrocephalus

Ortho came to eval. pt's bilat.LE, thighs and calves, for inc.tension, dx'd w/compartement syndrome.

Fentanyl/Versed drips stopped and plan is to start Ramifentanil when pt returns from the OR s/p fasciotomies.

Pt to cont on ventilator to protect airway, maintain ventilation/oxygenation.

Transplant team eval'd pt for possible listing for liver transplant; will re-eval tomorrow am, check LFT's for inc/dec/stable numbers and pt clinical appearance.

Pt to receive round the clock blood products for volume support (PRBC's, FFP, PLTS) and vasopressors to help maintain adeq. perfusion BP.

Will monitor acid/base status via ABG, PIP2, q4hrs

As pt's status is tencous at this time, will maintain extreme vigilance over pt's volume, tissue perfusion, blood loss, coagulopathy status.

[REDACTED]

MICU Intern

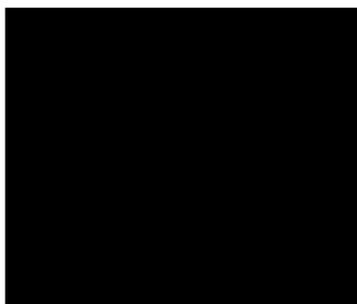
Note Type: Shift Nursing Assessment
Note Time: 2138 19 Apr 1998
Last Stored: 2220 19 Apr 1998
Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State sedated but still responsive to voice

NEUROLOGICAL



000033

Continued...

Location/Orientation	Alert	Motor Strength	sedated but does not follow commands
Pupils	Left Right Sluggish	Speech	intubated
Glascow Coma Score:			
Eyes Open To:	4		

PULMONARY

Respiration **vent on ac fifteen, fio fifty five** Chest Wall Expansion **Bilateral And Equal**
 Breath Sounds **clear diminished in bases**
 X Secretions **thick moderate secretion**

CARDIOVASCULAR

Heart Sounds	S1, S2	Rhythm	Regular	Ectopy	None
All Extremities	Warm and Dry	No X	See below.		
Circulation/Perfusion	Warm and Dry Warm	Capillary Refill	Brisk - < 3 seconds		
Circulation/Perfusion	Cool Toes	Capillary Refill	Slow - > 3 seconds		
Circulation/Perfusion	Warm and Dry Warm	Capillary Refill	Brisk - < 3 seconds		
Circulation/Perfusion	Cool Toes	Capillary Refill	Slow - > 3 seconds		
Edema	3+ Deep, Disappears in 1-2 Minutes				
	Generalized firm arms				

GI

Abdomen **Taut Distended Bowel Sounds Hypoactive**

GU

Urine Output **aneuric**

INTEGUMENTARY

Skin Color	Normal for Race	Skin Temp	Cool	Integrity	fasciotomy in lower extremities bilaterally otherwise no breakdown
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LINES

#1 X Periph. Line	Location	Right Forearm	Gauge	20
	Appearance	puffy hand but flushes well		
#1 X Arterial Line	Location	Radial		
	Appearance	dressing need to be changed otherwise no sign of infection		
#1 X Central Line	Type	Triple Lumen	Location	Left Subclavian
	Appearance	No redness, tenderness, swelling or drainage at site.		

MISCELLANEOUS

Comments **family emotional support given discussed extyensively with wife proper family visitation rules acknowledges understanding**

Note Type: **MD Progress Note (Nephrology Fellow)**
 Note Time: **2349 19 Apr 1998**
 Last Stored: **0001 20 Apr 1998**
 Stored by: **[REDACTED]**

MD Progress Note

000034

Continued...

Nephrology Fellow Addendum

Because of continued hyperkalemia post-op, pt was acutely dialyzed x 3 hrs under isovolemic conditions, then started on CVVH in attempt to control hyperkalemia, acidemia, and calcium. This also is being run isovolemic, with volume replacement to be determined per ICU staff tonight. Will continue to aggressively monitor metabolic status, especially over first few hours of CVVH.

In the morning we will reassess his volume requirements with the MICU team and determine goals for the day in terms of volume requirements. Depending on his stability, he may either be placed on a) intermittent HD followed by more continuous therapy if he appears too catabolic for just CVVH b) continued on continuous therapy alone if he appears stable, or c) returned to intermittent HD if his status improves.

From a renal standpoint, return of renal functions even after dialysis-dependence for a period of weeks is possible. It is hoped that the surgery will be successful in correcting the source of his metabolic disturbances and lead to eventual return of liver function.

Have discussed continued serious nature of pt's condition with his wife.

Please page tonight anytime with any questions/concerns regarding use of CVVH machine or electrolyte and volume issues.


Nephrology Service

000035

MEDICAL RECORD

PROGRESS NOTES

DATE

4/19/98

at the addendum

After informed consent obtained from wife (B) LE compartment pressures measured o stryker system

	(R)	(L)
Lat	47	31
Ant	19	19
SP	33	35
DP	27	68 remeasured EACW setup - 69

I mp (L) left deep posterior compartment syndrome

Plan - optimize prothrombin time, Hct (currently 33)

- check PT/PTT, Hct when back from CT scan
- recheck Deep posterior pressure on (L); if elevated bring to OR for 4 compartment release on (L); other releases as needed. Discussed indications, risks & complications of 4 compartment fasciotomies of (L) legs and (B) thighs, as needed, with wife to include, but not limited to infection, N/V compromise, scarring, death from anesthesia and need for further surgery. She understands and requests procedure be performed.

(Continue on reverse side)

REGISTER NO.

ESS NOTES

Medical Record

000036

PROGRESS NOTES

DATE

4/19/98

Brief Op Note

Preop Dx: (B) leg compartment syndromes

Post op Dx: (B) thigh/leg compartment syndromes

Procedure: (B) 4 compartment fasciotomy

Anesthesia: general

Surgeon: [REDACTED]

Fluids

IN

OUT

2u PRBCs

urine - 0

300 cc 5% Albumin

EBL - 2000cc

500cc NS

2.6 pack platelets

4 units FFP

Findings Preop/Intraop compartment pressures (pre release)

	(L)	(R)	(C) (B gauge spinal needle)
Ant thigh	115/54	65/17	
Post thigh	-/25	-/14	
leg Ant	56/-	36/-	
leg Lat	60/-	38/-	
DP	70/-	46/-	
SP	39/-	57/-	

Dusky (L) deep medial 750p medial compartment

Dusky (L) + (R) ant thigh compartment

Disposition - To SICU in guarded condition

[REDACTED]

MEDICAL RECORD

PROGRESS NOTES

DATE

4/20/98

ortho

VS

P 107 305

MAP ≈ 70

on vent-assist
control

PT overall stabilizing since fasciotomy, overall downward trend in CPK - 1497
 432,278 from 765,910 preop. Hgb 10.7 this AM requiring 11 units since OR. Latest PT - 2011 @ 20:55 last PM. This AM, pt's LLE had decreased pulse and poor color, temp, unable to Doppler DP or PT pulse, P bandage released, pulse, color, temp returned to base line. Wound redressed. Will continue to monitor LLE's with MICU team. Plan to return to OR for re debridement/exploration Tuesday or Wednesday.

WARD NO.

PROGRESS NOTES

Medical Record

000038

PROGRESS NOTES

DATE

Ortho Ref Op Note

Preop Dx: (B) LE compartment syndrome

Postop Dx: Nonviable (L) anterior thigh compartment

Procedure: 1) (B) gluteal compartment release

2) Exploration & debridement of previous fasciotomy sites.

Surgeon: [REDACTED]

Anesthesia: GEA

Fluids

LN

Cut

Crystalloid - 1500cc

EBL - 1500cc

XG pack platelets

4 units PRBCs

Findings: Nonviable (L) ant thigh compartment

Disposition: TOS ICU in guarded condition

[REDACTED]

000039

Note Type: MD Progress Note (Nephrology Fellow)
Note Time: 2349 19 Apr 1998
Last Stored: 0001 20 Apr 1998
Stored by: [REDACTED]

MD Progress Note

Nephrology Fellow Addendum

Because of continued hyperkalemia post-op, pt was acutely dialyzed x 3 hrs under isovolemic conditions, then started on CVVH in attempt to control hyperkalemia, acidemia, and calcium. This also is being run isovolemic, with volume replacement to be determined per ICU staff tonight. Will continue to aggressively monitor metabolic status, especially over first few hours of CVVH.

In the morning we we reassess his volume requirements with the MICU team and determine goals for the day in terms of volume requirements. Depending on his stability, he may either be placed on a) intermittent HD followed by more continuous therapy if he appears too catabolic for just CVVH b) continued on continuous therapy alone if he appears stable, or c) returned to intermittent HD if his status improves.

From a renal standpoint, return of renal functions even after dialysis-dependence for a period of weeks is possible. It is hoped that the surgery will be successful in correcting the source of his metabolic disturbances and lead to eventual return of liver function.

Have discussed continued serious nature of pt's condition with his wife.

Please page tonight anytime with any questions/concerns regarding use of CVVH machine or electrolyte and volume issues.

[REDACTED]
Nephrology Service

000040

Note Type: Shift Nursing Assessment
 Note Time: 0307 20 Apr 1998
 Last Stored: 0309 20 Apr 1998
 Stored by: [REDACTED]

11000035

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State *sedated but still responsive to voice*

NEUROLOGICAL

Location/Orientation *Alert* Motor Strength *sedated but does not follow commands*
 Pupils *Left Right Sluggish* Speech *intubated*
 Glasgow Coma Score:
 Eyes Open To: *4* Best Motor Response: *4* Best Verbal Response: *1* Glasgow Coma Score: *9*

PULMONARY

Respiration *vent on ac fifteen, fio fifty five* Chest Wall Expansion *Bilateral And Equal*
 Breath Sounds *DIMISHED IN RIGHT UPPER AND LOWER BASES CLEAR THROUGHOUT*
 X Secretions *thick moderate secretion*

CARDIOVASCULAR

Heart Sounds *S1, S2* Rhythm *Regular* Ectopy *None*
 All Extremities *Warm and Dry* No X See below.
 Circulation/Perfusion *Warm and Dry Warm* Capillary Refill *Brisk - < 3 seconds*
 Circulation/Perfusion *Cool Toes* Capillary Refill *Slow - > 3 seconds*
 Circulation/Perfusion *Warm and Dry Warm* Capillary Refill *Brisk - < 3 seconds*
 Circulation/Perfusion *Cool Toes* Capillary Refill *Slow - > 3 seconds*
 Edema *3+ Deep, Disappears in 1-2 Minutes*
Generalized firm arms

GI

Abdomen *Taut Distended Bowel Sounds Hypoactive*

GU

Urine Output *aneuric*

INTEGUMENTARY

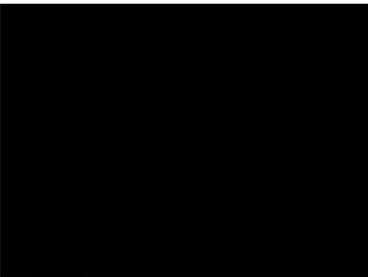
Skin Color *Normal for Race* Skin Temp *Cool* Integrity *fasciotomy in lower extremities bilaterally otherwise no breakdown*

LINES

#1 X Periph. Line Location *Right Forearm* Gauge *20*
 Appearance *puffy hand but flushes well*
 #1 X Arterial Line Location *Radial*
 Appearance *dressng need to be changed otherwise no sign of infection*
 #1 X Central Line Type *Triple Lumen* Location *Left Subclavian*
 Appearance *No redness, tenderness, swelling or drainage at site.*

MISCELLANEOUS

Comments *CONTINUE TO DOPPLER PULSES Q 1HR WITH POSITIVE PULSES*



000041

Note Type: Progress Note
 Note Time: 0332 20 Apr 1998
 Last Stored: 0343 20 Apr 1998
 Stored by: [REDACTED]

RECEIVED

PROGRESS NOTE

Source of Entry: Nursing

Topic of Note: Progress Note

Text of Note: PT HAS REMAINED UNSTABLE ALL NIGHT CONTINUE TO REQUIRE MULTIPLE BLOOD PRODUCTS TO MAINTIAN BP. LEVOPHED INCREASED TO 40CC/HR OR .14MCG/KG/MIN TO MAINTIAN BP >100 ON REMIFENTENYL WITH + RESPONSE PT STILL NODS HEAD THAT HE IS IN PAIN BUT DOES NOT BITE TUBE AND IS ABLE TO TLK TO PT AND COMFORT HIM. CONTINUE TO OZZE LARGE AMOUNTS OF SEROSANGOUS FLUID ONTO THE BED FROM LEGS. DRESSING ON BOTH LEGS SATURATED MORE ON BACK OF LEGS THAN ON FRONT. ACCESS CONTINUE TO BE A CHALLENGE WITH NOT ENOUGH PORTS FOR MEDICATIONS NEW SWAN PLACED PLAN TO DO DET OF NUMBERS IN AM.

Note Type: Shift Nursing Assessment
 Note Time: 0730 20 Apr 1998
 Last Stored: 0928 20 Apr 1998
 Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State sedated but still responsive to voice

NEUROLOGICAL

Location/Orientation Alert Motor Strength He is sedated on remi-frentanyl at 12cc/hr, but is alert and follows simple commands.
 Pupils Left and right at 3mm, sluggish Speech intubated
 Glasgow Coma Score:
 Eyes Open To: 4 Best Motor Response: 5 Best Verbal Response: 1 Glasgow Coma Score: 10

PULMONARY

Respiration He is mechanically ventilated with A/C, FIO2 of 55%, peep 8, tv 750, set rate of 15, he is breathing 24-25. Chest Wall Expansion Bilateral And Equal
 Breath Sounds DIMISHED IN RIGHT UPPER AND LOWER BASES CLEAR THROUGHOUT
 X Secretions thick moderate secretion

CARDIOVASCULAR

Heart Sounds S1, S2 Rhythm Regular Ectopy None
 All Extremities Warm and Dry No X See below.
 Circulation/Perfusion Warm and Dry Warm Capillary Refill Brisk - < 3 seconds
 Circulation/Perfusion Cool Toes Capillary Refill Slow - > 3 seconds
 Circulation/Perfusion Warm and Dry Warm Capillary Refill Brisk - < 3 seconds
 Circulation/Perfusion Cool Toes Capillary Refill Slow - > 3 seconds
 Edema 3+ Deep, Disappears in 1-2 Minutes JVD No X
 Generalized firm arms

GI

Abdomen Taut Distended Bowel Sounds Hypoactive

000042

Continued...

LATEST VALUES 9 48 22 6 4.70 2.01 715 -28
 Vasoactive Drips: #1 LEVOPHED 10CC/HR
 .053MCG/KG/MIN
 Comments: -PT HAS BEEN CONSISTENTLY TACHYCARDIC THROUGHOUT THE NIGHT, MAINTAINING 110-120'S
 -PT HAD EPISODE XI OF BRADYCARDIA (HR40'S) UPON RELEASE OF LLE DRESSING BUT MAINTAINED
 ADEQ.BP THROUGHOUT EPISODE (TOTAL TIME:1MIN)
 -WILL CONT TO MONITOR FOR ADEQ.MAP'S >70, AND TITRATE LEVOPHED/GIVE BACK VOLUME, BLOOD
 PRODUCTS AS NECESSARY.

RESPIRATORY
 ETT Size: 8.0 Date Placed: 18APR98
 CXR: TUBES AND LINES ALL IN GOOD POSITION; ELEVATED R HEMIDIAPHRAGM; RESOLVING BLOOD IN ALVEOLI
 RR: 20 Exam: DEC.BS @ BASES B X On Ventilator X Show ABGs
 |-----Ventilator:-----|

Time	Mode	Rate	Vt	PEEP	Peak	FiO2
LATEST VALUES	A/C	20/12	750.00	5.00	75.00	0.55
-----Spontaneous/Wean.Paramet:-----						

	Vt exp	PIP
	820.00	27.90

	pH	pCO2	pO2	a-SAT	(A-a)O2	BE
	7.369	24.000	309.000	100	59.1	-10.000
					50	

Comments: PT DOING WELL FROM RESPIRATORY STANDPOINT; AS VENTILATING/OXYGENATING ADEQUATELY
 -WILL TRY PT ON CPAP+PS AND MONITOR FOR FATIGUE, HYPOXIA, INC.WORK OF BREATHING

HEME/COAG
 Exam: PT W/ LG. FASCIOTOMIES X8 UP AND DOWN BLE, DRESSED IN KERLIX AND
 SKEEPING SANGUINOUS, MINIMALLY SEROUS, DRAINAGE.
 -BUE S EVID OF PETECHIAE, GROSS ACTIVE BLEEDING

Time	Hct	PLTS	PT	PTT	FIBR	Transfusions:
LATEST VALUES	31.0	37	24.2	87.0	202	19APR98: 13U PRBC'S 7U FFP 2-6PKS PLTS

Comments: PT HAS RECEIVED MULTIPLE BLOOD PRODUCTS W/ MINIMAL INC.IN HCT;FROM OR PT'S HCT WAS 20.3,
 AFTER MASS TRANSFUSION HCT 30.4
 -WILL CONT TO TRANSFUSE W/ BLOOD PRODUCTS AS NECESSARY; FULL APPROVAL FROM BLOOD BANK
 GOALS: HCT-30 PLTS>50 FIBRINOGEN>100 PT<20

RENAL/FLUIDS/LYTES
 IV FLUIDS/RATE: MULTIPLE BLOOD PRODUCTS; D10W+3AMPS NAHCO3 REMIFENTANIL DRIP LEVOPHED DRIP
 Na: 138 K: 6.6 CL: 102 BUN: 17 CREAT: 6.4

Comments: I/O'S NOT ACCURATE CURRENTLY SECONDARY TO HI VOLUME INFLOW AND HIGH MAINTAINANCE OF PT
 CARE. ALSO, PT LOSSES ARE NOT ACCURATE DUE TO LG. AMTS OF BLOOD/VOLUME LOST THROUGH
 WEEPAGE FROM DRESSINGS AND ONTO BEDDING.

METABOLIC/NUTRITION
 BEE: 2500 SOURCE: TPN KCal/Kg 25 PROTEIN (gm/kg): 1.5
 Gluc: 52 Alb: 2.5
 Ca: 5.1 PO4: 9.1

Comments: Pt to start on TPN TODAY IN ATTEMPT TO RE-NOURISH THE PT AND COMBAT AGAINST FURTHER MUSCLE
 WASTING/AUTO-PROTEIN BREAKDOWN FOR ENERGY REQUIREMENTS.
 -AS PT IS INTACT NEUROLOGICALLY AND RECENT H/O SEVERE MALNUTRITION, WILL START W/ FULL BAG
 AND MONITOR LABS AND CLINICAL ASSESSMENT CLOSELY.

GI/LIVER Exam: EDEMATOUS, NT +BS

000044

Continued...

SGOT: 4751 SGPT: 1718 LDH: 52992 Alk Phos: 83 TBili: 4.8 LIPASE: 737
 AMYLASE: 282

Comments: PT HAS GOOD BS AND ALTHOUGH DIFFICULT TO EXAMINE, NO EVID. OF MASSES
 -PT TO START TPN THIS EVENING
 -T/C STARTING TUBEFEEDS TO KEEP GUT ACTIVE AND ACHIEVE A MORE NL PATTERN OF NUTRITION

INFECTION

Antibiotics #1 UNASYN D#4

TEMP/MAX: 99.0 Exam: PT HAS LG. FASCIOTOMIES BLE IN KERLIX DRESSINGS- NO EVID OF
 INFECTION/ERYTHEMA
 -LINES APPEAR C/D/I NO EVID. OF ERYTHEMA/INFECTION

WBC/DIFF. (P,B,L,M,E) 15.9

SKIN/EXTREMITIES Decubiti NONE

Pulses INTACT BUE Rash NONE Edema GENERALIZED BODY
 DOPPLER +BLE

TUBES/LINES

IV: L HAND Cen. Vein: RIJ PA Cath: D1
 D3 CORDIS
 D3

Arterial: L WRIST Foley: D3 NGT: D2
 D3

Comments: ALL LINES APPEAR C/D/I

Medications

Name

#1 LEVOPHED DRIP
 D10W+3AMPSNAHCO3
 REMIFENTANIL DRIP
 CARAFATE
 AMPHOGEL
 UNASYN
 BLOOD PRODUCTS PRN

IMP/PLAN

Comment: AS PER SYSTEM ABOVE

-DISCUSSED WITH TEAM ON ROUNDS

[REDACTED]
 MICU Intern

Note Type: Progress Note (Nutrition Support)
 Note Time: 1153 20 Apr 1998
 Last Stored: 1222 20 Apr 1998
 Stored by: [REDACTED]

PROGRESS NOTE

Source of Entry: Pharmacist
 Subject of Note: Nutrition Support

000045

Continued...

Text of Note:

Patient is a 33yo admitted to [redacted] and transferred to [redacted] after he collapsed during a PT test. Patient dx with rhabdomyolysis and compartment syndrome requiring BLE fasciotomies, now with acute renal and hepatic failure. Hospital course is also c/b metabolic acidosis, respiratory failure and DIC. Patient is currently on ventilator and continuous HD. Also being considered for liver and/or kidney transplant.

Nutrition history: Unable to talk to patient at this time. There is a h/o dieting and "natural diuretic" use PTA in order to pass PT test. Adm wt 102kg, current wt 124kg, Ht 5'8". Dr. [redacted] talked to wife who said that patient was somewhat overweight but he does have large build. DBW 73 +/- 10%. Given history, would dose kcal and protein based on wt b/n 90-100kg. Estimated energy needs 2520 kcal/day (BEE x 1.3 for wt maintenance). Estimated protein needs 135 gm/day (1.5gm/kg/day based on wt of 90kg). Labs: K 6.8, HCO3 19, gluc 95, BUN 17, SCr 6.2, Ca 5.3, PO4 9.3, albumin 2.6 (receiving exogenous albumin), LFT's yesterday were markedly elevated.

A/P: [redacted] is critically ill patient, at risk for malnutrition secondary to inability to take po, h/o dieting PTA and probable catabolic state. Agree with starting nutrition support at this time. Would also agree with starting TPN since it is anticipated that patient may need to go to OR multiple times. Although patient is in renal and hepatic failure, would consider aggressive regimen since he is being dialyzed (BUN 17) and mental status appears to be intact according to Dr. [redacted]

Recommendations:

1. TPN as follows: Hepatamine 135gm (high branched chain does not require metabolism by liver), Dextrose 408gm, Fat 59gm. Agree with not adding K, PO4 and Mg. NaCl 60 meq, NaAC 60 meq, CaGluc 20 meq. You can add more Ca tomorrow. This regimen will provide 2500kcal/day (25kcal/kg/day).
2. Monitor mental status and BUN. If he is unable to tolerate this protien, we may need to decrease.
3. Would consider dc'ing dextrose from IVF to prevent overfeeding patient.
4. Would check a triglyceride level.
5. Would consider low rate enteral feeds with Osmolite or Promote and increase as tolerated. I will give you a goal rate in a day or two. We may want to perform metabolic cart sometime this week to make sure we are feeding appropriately since we can't monitor other nutritional parameters such as 24 hr UUN and prealbumin. Will follow closely.

Note Type: Shift Nursing Assessment
Note Time: 1253 20 Apr 1998
Last Stored: 1257 20 Apr 1998
Stored by: [redacted]

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State *sedated but still responsive to voice*

NEUROLOGICAL

Location/Orientation *Alert*

Motor Strength *He is sedated on remi-frentanyl at 12cc/hr, but is alert and follows simple commands.*

Pupils

Left and right at 3mm, sluggish

Speech

intubated

PULMONARY

000046

Continued...

Respiration **He is mechanically ventilated** Chest Wall Expansion **Bilateral And Equal**
with A/C, FIO2 of 55%, peep 8,
tv 750, set rate of 15, he is
breathing 24-25.

Breath Sounds **DIMISHED IN RIGHT UPPER AND LOWER BASES CLEAR THROUGHOUT**

X Secretions **thick moderate secretion**

CARDIOVASCULAR

Heart Sounds **S1, S2** Rhythm **Regular** Ectopy **None**
All Extremities **Warm and Dry** No X See below.
Circulation/Perfusion **Warm and Dry Warm** Capillary Refill **Brisk - < 3 seconds**
Circulation/Perfusion **Cool Toes** Capillary Refill **Slow - > 3 seconds**
Circulation/Perfusion **Warm and Dry Warm** Capillary Refill **Brisk - < 3 seconds**
Circulation/Perfusion **Cool Toes** Capillary Refill **Slow - > 3 seconds**
Edema **3+ Deep, Disappears in 1-2 Minutes** JVD No X
Generalized firm arms

GI

Abdomen **Taut Distended Bowel Sounds Hypoactive**

GU

Urine Output **aneuric**

INTEGUMENTARY

Skin Color **Normal for Race** Skin Temp **Cool** Integrity **fasciotomy in lower**
extremities
bilaterally
otherwise no
breakdown

LINES

#1 X Periph. Line Location **Right Forearm** Gauge **20**
Appearance **puffy hand but flushes well**
#1 X Arterial Line Location **Radial**
Apperance **dressing need to be changed otherwise no sign of infection**
#1 X Central Line Type **Triple Lumen** Location **Left Subclavian**
Appearance **No redness, tenderness, swelling**
or drainage at site.

MISCELLANEOUS

Comments **CONTINUE TO DOPPLER PULSES Q 1HR WITH POSITIVE RESULTS, WIFE IS AT BEDSIDE, HE IS GOING T**
GO TO THE OR TODAY. THUS FAR TODAY HE HAS RECEIVED 6U FFP, 1 CRYO, 2 SIX PACK PLT, AND
2UPRBCS, REMAINS ON LEVOPHED TO KEEP MAP >70, IS ON 15CC/HR OR 0.05MCG/KG/MIN. CONT TO
ASSESS.

Note Type: **Clinical Note (CP Fluids & Electrolytes)**
Note Time: **1358 20 Apr 1998**
Last Stored: **1400 20 Apr 1998**
Stored by: **[REDACTED]**

Clinical Note

AT BEGINNING OF SHIFT PT HAD A K OF 6.6, DIALYSIS CONTINUED, MOST RECENT K IS 4.2 FROM CCP, SHE HAD
REMAINED HEMODYNAMICALLY STABLE WITH ABP 115-140/50-70 HR 110-13. 1G CACL GIVEN IV. CONTINUE TO
ASSESS.

000047

Note Type: Clinical Note (CP Respiratory)
Note Time: 1401 20 Apr 1998
Last Stored: 1403 20 Apr 1998
Stored by: [REDACTED]

Clinical Note

PATIENT WITH PO2 OF 209.9, FIO2 WAS DECREASED FROM 55% TO 40% PER DR. [REDACTED] SPO2 97-99% ALL DAY AND RR 25-30. CONT TO ASSESS,

Note Type: Progress Note (SHIFT)
Note Time: 1405 20 Apr 1998
Last Stored: 1420 20 Apr 1998
Stored by: [REDACTED]

PROGRESS NOTE

Source of Entry: Nursing
Subject of Note: SHIFT NOTE
Text of Note: PATIENT RESTING IN BED WITH HOB ELEVATED AT 20 DEGREES. NEURO: HE IS SEDATED ON REMI-FENTANYL AT 12CC/HR, BUT IS ALERT AND WILL FOLLOW SIMPLE COMMANDS. CV: HE HAS REMAINED IN ST110-130, THROUGHOUT, BUT WITHOUT ECTOPY ABP 120-140/55-70 CORRELATES WELL WITH NBP, LE PULSES ARE DOPPLERABLE ONLY. RIGHT FA PIV INTACT, RIGHT FEMORAL LINE FOR DIALYSIS INTACT, AND RIJ SWAN WITH CORDIS INTACT. LEVOPHED TITRATED TO KEEP MAP >70, CURRENTLY ON 15CC/HR=0.05MCG/KG/MIN. RESP: CURRENTLY ON A/C, FIO2 40%, TV 750, PEEP 5, AND MACHINE RATE OF 15. GI: OGT CLAMPED, HAD ONE LARGE STOOL X1. GU: HE HAS NOT HAD ANY UO SO FAR. INTEG: BILATERAL LE WITH DRESSINGS INTACT, SERO-SANGUENOUS DRAINAGE NOTED ON DRESSING. PATIENT HAS GONE TO THE OR, TRANSPORTED TO OR AT 1315 WITH OR STAFF. PSYCHOSOCIAL: FAMILY AT BEDSIDE.

Note Type: MD Progress Note
Note Time: 1527 20 Apr 1998
Last Stored: 1536 20 Apr 1998
Stored by: [REDACTED]

MD Progress Note

NEPHROLOGY ATTENDING

Patient continued extremely hypercatabolic this am, with hyperkalemia and acidosis, secondary to bilateral lower extremity compartment syndrome, developed in the setting of exercise-induced rhabdomyolysis/hepatic necrosis, with probably concurrent volume depletion and hypokalemia. The patient has received hemodialysis (Fresenius--F8, with 35 HCO3 bath and 1 K bath, since 0645 this am, after failing CVVH secondary to rising K. He has undergone debridement, and release of pressure of muscles of upper legs. HD was continued, heparin free, in the OR throughout the procedure, and K and HCO3 have been maintained. He sustained considerable blood loss secondary to his coagulopathy, and had an arrhythmia requiring cardioversion before transfer back to the MICU from the OR. Our plan is to resume HD with previous bath, ensure that K and HCO3 are reasonably controlled in the 4 and 15-20 range, and then attempt to begin CVVH-D with a 35 HCO3/140 Na/105 Cl dialysate, with hourly K, Mg, and Ca determinations with replacement as needed. Please see Dr. [REDACTED] note to follow for full details.1

Note Type: MD Progress Note (Hematology/Oncology Service)
Note Time: 1614 20 Apr 1998
Last Stored: 1625 20 Apr 1998
Stored by: [REDACTED]

MD Progress Note

Pt remains extremely ill s/p bilat long LE fasciotomies yesterday associated with considerable blood loss despite aggressive replacement with FFP. Sadly, I am informed that the muscle is probably all necrotic which would mean that he would require bilat hip disarticulations to be performed for survival. Continue with target values for coag parameters as outlined previously for replacement therapy for his coagulopathy.

[REDACTED] Hematology/Oncology Service

000048

Note Type: Shift Nursing Assessment
Note Time: 1631 20 Apr 1998
Last Stored: 1641 20 Apr 1998
Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT

NEUROLOGICAL

Location/Orientation **Alert** Motor Strength **PT IS SEDATED, EYES OPEN
COUPLE AND TIMES AND
GRIMACING**
Pupils **Left and right at 3mm, BRISK** Speech **intubated**

PULMONARY

Respiration **A/C, TV750, RATE 15, PEEP 5, PS 10, FIO2 50** Chest Wall Expansion **Bilateral And Equal**
Breath Sounds **DIMISHED IN RIGET UPPER AND LOWER BASES CLEAR THROUGHOUT**
X Secretions

CARDIOVASCULAR

Heart Sounds **S1, S2** Rhythm **Regular** Ectopy **None**
All Extremities **Warm and Dry** No X See below.
All Peripheral Pulses **Strong and Equal** No X See below.
Circulation/Perfusion **Cool Clammy** Capillary Refill **Slow - > 3 seconds**
LUE Pulses **Doppler** Capillary Refill **Slow - > 3 seconds**
Circulation/Perfusion **Cool Clammy**
LLE Pulses **Doppler** Capillary Refill **Slow - > 3 seconds**
Circulation/Perfusion **Cool Clammy**
RUE Pulses **Doppler** Capillary Refill **Slow - > 3 seconds**
Circulation/Perfusion **Cool Clammy**
FLE Pulses **Doppler** Capillary Refill **Slow - > 3 seconds**
Edema **3+ Deep, Disappears in 1-2 Minutes** JVD No X
Generalized firm arms

GI

Abdomen **Taut Distended Bowel Sounds Hypoactive**

GU

Urine Output **aneuric, PT. RECEIVES DIALYSIS**

INTEGUMENTARY

Skin Color **Pale** Skin Temp **Cool Clammy** Integrity **fasciotomy in lower
extremities
bilaterally, RIGHT
SIDE FASIOTOMY
UPPER THIGH,
COPIOUS BLEEDING
NOTED FROM
DRAINAGE.**

LINES

#1 X Periph. Line Location **Right Forearm** Gauge **20**
Appearance **puffy hand but flushes well**
#1 X Arterial Line Location **Radial**
Apperance **dressng need to be changed otherwise no sign of infection**
#1 X Central Line Type **Triple Lumen** Location **Left Subclavian**

000049

Continued...

#2 X Central Line	Type QUINTON FOR DIALYSIS	Appearance No redness, tenderness, swelling or drainage at site.	Location RIGHT FEMORAL
		Appearance	
MISCELLANEOUS			
Comments PT. IS VERY UNSTABLE CARDIOVASCULARIZED WISE. CONT. TO TITRATE LEVOPHED TO CONTROL BLOOD PRESSURE AND A-VIB. PT. CONT. TO RECEIVES MULTIPLE BLOOD PRODUCTS AND FLUIDS. WIFE WAS IN ROOM TO SEE PT. FOR SUPPORT.			

Note Type: **Progress Note (ADMIT)**
 Note Time: **1644 20 Apr 1998**
 Last Stored: **1653 20 Apr 1998**
 Stored by: [REDACTED]

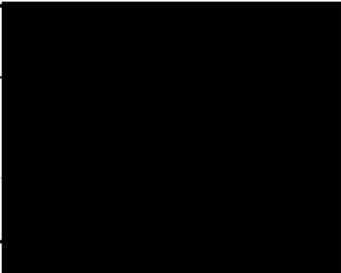
PROGRESS NOTE	
Source of Entry:	Nursing
Subject of Note:	Progress Note
Text of Note:	RECEIVED PT. FROM OR S/P BILATERAL UPPER THIGH FASCIOTOMY. PT. IS VERY UNSTABLE (CARDIOVERTED X2 IN OR FOR A-VIB). PT. IS SEDATED. SKIN IS COOL AND CLAMMY. CONT. TO TITRATE LEVOPHED AND PROVIDE MULTIPLE BLOOD PRODUCTS AND FLUIDS TO CONTROL BLOOD PRESSURE. PT. IS RECEIVING DIALYSIS VIA QUINTON IN RIGHT FEMORAL. PT. IS BLEEDING IN LARGE AMT. FOR SURGICAL WOUNDS. WIFE IN ROOM FOR COUPLE MINUTES FOR SUPPORT. CONT. TO MONITOR AND STABILIZE PT.

Note Type: **Progress Note (progress)**
 Note Time: **1700 20 Apr 1998**
 Last Stored: **1711 20 Apr 1998**
 Stored by: [REDACTED]

PROGRESS NOTE	
Source of Entry:	OTS
Subject of Note:	Progress Note
Text of Note:	PT s/p further gluteal fasciotomies, episode arrythmia and cont req for blood products. Question of further necrotic muscle that will require debridement. p3 today:alk phos 38, alt 785 and TB5.6. Currently not on liver transplant because of continuing worsening of lower extremities and possible return of liver function. D/c Dr [REDACTED] Will follow.

Note Type: **Procedure-Insertion Note**
 Note Time: **1759 20 Apr 1998**
 Last Stored: **1803 20 Apr 1998**
 Stored by: [REDACTED]

- PROCEDURE/INSERTION NOTE -	
Type ELECTIVE CARDIOVERSION	Performed By: [REDACTED]



000050

Continued...

Ward: **MICU**

Supervised By: [REDACTED]

Informed Consent/Counseling: YES NO **X**

Comment: **PT DEVELOPED ATRIAL FIBRILLATION WITH RESULTANT DECREASE IN SBP'S TO 60S. PT WAS CARIOVERTED SUCCESSFULLY AT 100J X 1 TO SINUS RHYTHM AT 110 BEATS/MIN. TOLERATED WELL.**

Indications **HEMODYNAMICALLY UNSTABLE A FIB** Using A/An **CARDIOVERTER**

Prep

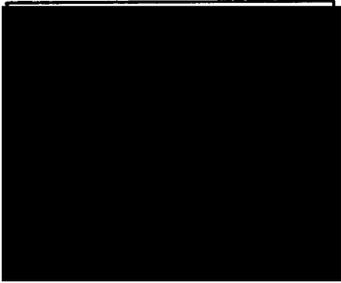
Medications: **VERSED, REMIFENTANYL**

Location **CHEST**

Pt. Response **Tolerated well**

Note Type: **Shift Nursing Assessment**
 Note Time: **1937 20 Apr 1998**
 Last Stored: **0451 21 Apr 1998**
 Stored by: [REDACTED] RN

SHIFT NURSING ASSESSMENT	
PSYCHOSOCIAL	
Behavior/Emotional State FRIGHTENED BUT ACCEPTING	
NEUROLOGICAL	
Location/Orientation Alert & Oriented To Person, Place, and TimeAlert	Motor Strength PT IS SEDATED, EYES OPEN COUPLE AND TIMES AND GRIMACING
Pupils Left and right at 3mm, BRISK	Speech intubated
Glasgow Coma Score: Best Motor Response: 5 Best Verbal Response: 5	
PULMONARY	
Respiration FI	Chest Wall Expansion Bilateral And Equal
Breath Sounds DIMISHED IN RIGHT UPPER AND LOWER BASES CLEAR THROUGHOUT	
X Secretions thin, sm, white	
CARDIOVASCULAR	
Heart Sounds S1, S2	Rhythm sinus tachycardic Ectopy Rare Unifocal PVC's
All Extremities Warm and Dry	No X See below.
All Peripheral Pulses Strong and Equal	No X See below.
Circulation/Perfusion Cool Clammy	Capillary Refill Slow - > 3 seconds
LUE Pulses weak, but palpable	
Circulation/Perfusion Cool Clammy	Capillary Refill Slow - > 3 seconds
LLE Pulses weak, palpable	
Circulation/Perfusion Cool Clammy	Capillary Refill Slow - > 3 seconds
RUE Pulses Doppler	
Circulation/Perfusion Cool Clammy	Capillary Refill Slow - > 3 seconds
RLE Pulses weak, palpable	
Edema 3+ Deep, Disappears in 1-2 Minutes Generalized firm arms	JVD No X



000051

Continued...

GI

Abdomen *Taut Distended Bowel Sounds Hypoactive*

X Tubes

#1 *Orogastric*

Location *Left*

Draining To *Gravity*

GU

Urine Output *aneuric, PT. RECEIVES DIALYSIS*

Foley Insert Date *4/13*

INTEGUMENTARY

Skin Color *Pale*

Skin Temp *Cool Clammy*

Integrity *fasciotomy in lower extremities bilaterally, RIGHT SIDE FASIOTOMY UPPER THIGH, COPIOUS BLEEDING NOTED FROM DRAINAGE.*

LINES

#1 **X** Periph. Line Location *Right Forearm* Gauge *20*

Appearance *puffy hand but flushes well*

#1 **X** Arterial Line Location *Radial*

Appearance *dressing need to be changed otherwise no sign of infection*

#1 **X** Central Line Type *swan* Location *Right Subclavian*

Insert Date *4/20*

Appearance *No redness, tenderness, swelling or drainage at site.*

#2 **X** Central Line Type *quinton after urokinase* Location *RIGHT FEMORAL*

Insert Date

Appearance *No redness, tenderness, swelling or drainage at site.*

#3 **X** Central Line Type *quinto for dialysis* Location *LIJ*

Insert Date *4/21*

Appearance *No redness, tenderness, swelling or drainage at site.*

MISCELLANEOUS

Comments *pt returned from OR for extension of fasciotomies which cont to ooze large amounts of blood requiring continual blood prod transfusion. ARF cont with hemodialysis changed to cvvhd.*

Note Type: **MD Progress Note (Nephrology Fellow)**

Note Time: **2002 20 Apr 1998**

Last Stored: **2105 20 Apr 1998**

Stored by:

MD Progress Note

000052

Continued...

Nephrology Fellow

Events of today: worsening metabolic status this a.m. with hyperkalemia and acidemia requiring further dialysis. Pt returned to OR for exploratory of legs indicating significant bilateral necrosis. Pt experienced run of a-fib with RVR by report with hypotension requiring DC cardioversion. Another episode noted on return to MICU. Currently receiving intermittent HD against K=1 bath, with K=3.5 by I-STAT. Bath now changed to K=3. CHCS currently down and results unavailable despite repeated discussions with lab by myself, Dr. [REDACTED] and MICU staff.

EXAM

VS

Neuro: sedated but arousable, able to follow commands and move all extremities

Pul: diffuse crackles

Cor: RRR

Abd: distended, tense, diminished BS

Ext: tense firm swelling lower > upper extremities

IMP

-oliguric acute renal failure: 2nd rhabdomyolysis, requiring extraordinary support for management of K and HCO₃. Currently receiving extended intermittent therapy, would like to attempt continuous renal replacement therapy if able to stabilize hematological and metabolic status.

-liver failure: enzymes

-coagulopathy: 2nd liver failure, continues to be ongoing problem

-rhabdomyolysis: continuing ongoing ischemia

-s/p fasciotomies: extremely difficult hemostasis

-nutrition: TPN to be started, given metabolic status would not attempt supplementation of anything beyond essential minerals, small amounts bicarb and fat. Protein intake discouraged given current issues.

REC

-will attempt to restart CVVH-D tonight with low-dose heparin use after re-evaluation

-check K, HCO₃, Ca⁺⁺, glucose q hour

-d/c D20W/bicarb drip

-d/c lactulose

-minimize protein in TPN

[REDACTED]
Nephrology Service

000053

Note Type: MD Progress Note (Hematology/Oncology Service)
Note Time: 0003 21 Apr 1998
Last Stored: 1152 21 Apr 1998
Stored by: [REDACTED]

000054

MD Progress Note

Pt remains critically ill although liver function appears to be improving (AST = 1901, ALT = 479, albumin = 1.8) hopefully this will offset his factor requirement together with TPN by increased native synthesis. He continues to lose a great deal of blood from extensive fasciotomies mostly related to the nature of the procedure itself but aggravated by the dual coagulopathy (DIC and acute liver mediated coagulopathy from synthetic failure). Today PT = 18.5, PTT = 52.3, fibrinogen = 163. PLT = 54K, H/H = 8.4/23.9. He has required tremendous quantities of blood products to maintain target coag and hematologic profiles. Concur with continued replacement as needed as you are doing, that is all that can be done. If citrate anticoagulation cannot be done in lieu of hypocalcemia, then no choice but to use low dose heparin. Although DIC is probably responsible for the minor component of his coagulopathy, low dose heparin has been used occasionally in DIC (cases associated with obstetric forms or related to APL) to decrease the activated thrombin through antithrombin III. It would not be indicated in the management of this pt, however, but apparently there is no other choice here since ultrafiltration and HD are crucial. Agree with continued close surveillance of his muscle with debridement as required, we can only pray that he will not require amputations.

[REDACTED] hematology/oncology service

Note Type: Progress Note [REDACTED] CP Fluids & Electrolytes)
Note Time: 0031 21 Apr 1998
Last Stored: 0641 21 Apr 1998
Stored by: [REDACTED]

PROGRESS NOTE

Source of Entry: Nursing

Subject of Note: Progress Note

Text of Note: 33 yo husband well until dehydrated and on diet pills before taking APFT T [REDACTED] one week ago, transferred to [REDACTED] CCU, rhabdomyolysis with liver and renal failure, compartment syndrome req fasciotomies extended up to hips with palpable pedal pulses since. Continual transfusions required for blood loss through fasciotomies, DIC. Grossly edematous, but on cont cvvhd. Pt is alert occ but on 45 cc/hr remi-fentanyl and occ versed; Pts wife in to visit until she went tomstay with cousin about 2300; she is very hopeful and full of questions about why this happened. [REDACTED] RN

Note Type: Shift Nursing Assessment
Note Time: 0051 21 Apr 1998
Last Stored: 0522 21 Apr 1998
Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State Participative Sedated

NEUROLOGICAL

Location/Orientation	Alert & Oriented To Person, Place, and TimeAlert	Motor Strength	PT IS SEDATED, EYES OPEN COUPLE AND TIMES AND GRIMACING
Pupils	Left and right at 3mm, BRISK	Speech	intubated

PULMONARY

Respiration FI Chest Wall Expansion Bilateral And Equal
Breath Sounds DIMISHED IN RIGHT UPPER AND LOWER BASES CLEAR THROUGHOUT

000054

Continued...

X Secretions thin, sm, white		
CARDIOVASCULAR		
Heart Sounds <i>S1, S2</i>	Rhythm <i>sinus tachycardic</i>	Ectopy <i>Rare Unifocal PVC's</i>
All Extremities Warm and Dry	No X See below.	
All Peripheral Pulses Strong and Equal	No X See below.	
Circulation/Perfusion <i>Cool Clammy</i>		Capillary Refill <i>Slow - > 3 seconds</i>
LUE Pulses <i>weak, but palpable</i>		Capillary Refill <i>Slow - > 3 seconds</i>
Circulation/Perfusion <i>Cool Clammy</i>		Capillary Refill <i>Slow - > 3 seconds</i>
LLE Pulses <i>weak, palpable</i>		Capillary Refill <i>Slow - > 3 seconds</i>
Circulation/Perfusion <i>Cool Clammy</i>		Capillary Refill <i>Slow - > 3 seconds</i>
RUE Pulses <i>Weak</i>		Capillary Refill <i>Slow - > 3 seconds</i>
Circulation/Perfusion <i>Cool Clammy</i>		Capillary Refill <i>Slow - > 3 seconds</i>
RLE Pulses <i>weak, palpable</i>		
Edema <i>3+ Deep, Disappears in 1-2 Minutes</i>	JVD	No X
<i>Generalized firm arms</i>		
GI		
Abdomen <i>Taut Distended Bowel Sounds Hypoactive</i>		
X Tubes		
#1 <i>Orogastric</i>	Location <i>Left</i>	Draining To <i>Gravity</i>
GU		
Urine Output <i>aneuric, PT. RECEIVES DIALYSIS</i>		Foley Insert Date <i>4/13</i>
INTEGUMENTARY		
Skin Color <i>Pale</i>	Skin Temp <i>Cool Clammy</i>	Integrity <i>fasciotomy in lower extremities bilaterally, RIGHT SIDE FASIOTOMY UPPER THIGH, COPIOUS BLEEDING NOTED FROM DRAINAGE.</i>
LINES		
#1 X Periph. Line	Location <i>Right Forearm</i>	Gauge <i>20</i>
	Appearance <i>puffy hand but flushes well</i>	
#1 X Arterial Line	Location <i>Radial</i>	
	Apperance <i>dressing need to be changed otherwise no sign of infection</i>	
#1 X Central Line	Type <i>swan</i>	Location <i>Right Subclavian</i>
	Insert Date <i>4/20</i>	Appearance <i>No redness, tenderness, swelling or drainage at site.</i>
#2 X Central Line	Type <i>quinton after urokinase</i>	Location <i>RIGHT FEMORAL</i>
	Insert Date	Appearance <i>No redness, tenderness, swelling or drainage at site.</i>
#3 X Central Line	Type <i>quinto for dialysis</i>	Location <i>LIJ</i>
	Insert Date <i>4/21</i>	Appearance <i>No redness, tenderness, swelling or drainage at site.</i>
MISCELLANEOUS		
Comments <i>pt cont to req 2-3 u prbc per hr plus ffp for hct down to 17, ptt 18; CVVHD cont with replacement fluids 2 liters in 1700 effluent plus 500 EBL per hour</i>		

000055

000021

Note Type: Shift Nursing Assessment
Note Time: 0423 21 Apr 1998
Last Stored: 0523 21 Apr 1998
Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State *Participative Sedated*

NEUROLOGICAL

Location/Orientation *Alert & Oriented To Person, Place, and Time* Alert
Motor Strength *PT IS SEDATED, EYES OPEN COUPLE AND TIMES AND GRIMACING*

Pupils *Left and right at 3mm, BRISK* Speech *intubated*

PULMONARY

Respiration *FI* Chest Wall Expansion *Bilateral And Equal*
Breath Sounds *DIMISHED IN RIGHT UPPER AND LOWER BASES CLEAR THROUGHOUT*
 Secretions *thin, sm, white*

CARDIOVASCULAR

Heart Sounds *S1, S2* Rhythm *sinus tachycardic* Ectopy *Rare Unifocal PVC's*
All Extremities *Warm and Dry* No See below.
All Peripheral Pulses *Strong and Equal* No See below.
Circulation/Perfusion *Cool Clammy* Capillary Refill *Slow - > 3 seconds*
LUE Pulses *weak, but palpable*
Circulation/Perfusion *Cool Clammy* Capillary Refill *Slow - > 3 seconds*
LLE Pulses *weak, palpable*
Circulation/Perfusion *Cool Clammy* Capillary Refill *Slow - > 3 seconds*
RUE Pulses *Weak*
Circulation/Perfusion *Cool Clammy* Capillary Refill *Slow - > 3 seconds*
RLE Pulses *weak, palpable*
Edema *3+ Deep, Disappears in 1-2 Minutes Generalized firm arms* JVD No

GI

Abdomen *Taut Distended Bowel Sounds Hypoactive*
 Tubes
#1 *Orogastric* Location *Left* Draining To *Gravity*

GU

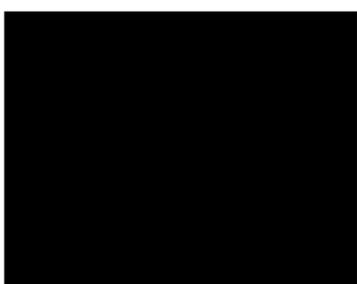
Urine Output *aneuric, PT. RECEIVES DIALYSIS* Foley Insert Date *4/13*

INTEGUMENTARY

Skin Color *Pale* Skin Temp *Cool Clammy* Integrity *fasciotomy in lower extremities bilaterally, RIGHT SIDE FASIOTOMY UPPER THIGH, COPIOUS BLEEDING NOTED FROM DRAINAGE.*

LINES

#1 Periph. Line Location *Right Forearm* Gauge *20*
Appearance *puffy hand but flushes well*



000056

Continued...

#1 X Arterial Line	Location Radial	Appearance dressing need to be changed otherwise no sign of infection
#1 X Central Line	Type swan	Location Right Subclavian
	Insert Date 4/20	Appearance No redness, tenderness, swelling or drainage at site.
#2 X Central Line	Type quinton after urokinase	Location RIGHT FEMORAL
	Insert Date	Appearance No redness, tenderness, swelling or drainage at site.
#3 X Central Line	Type quinto for dialysis	Location LIJ
	Insert Date 4/21	Appearance No redness, tenderness, swelling or drainage at site.

MISCELLANEOUS

Comments pt cont to req 2-3 u prbc per hr plus ffp for hct down to 17, ptt 18; CVVHD cont with replacement fluids 2 liters in 1700 effluent plus 500 EBL per hour

Note Type: Progress Note (CP Fluids & Electrolytes)
 Note Time: 0720 21 Apr 1998
 Last Stored: 0823 21 Apr 1998
 Stored by: [REDACTED]

PROGRESS NOTE

Source of Entry: Social Work
 Subject of Note: Progress Note
 Text of Note:

MET WIT PT, MEDICAL TEAM X2 THIS DAY AND YESTERDAY. RE: PT MEDICALLY RETIRED. PT RECEIVING DIALYSIS. ALSO PT LIVER FUNCTION BEING EXAMINED AS WELL. PT FAMILY NOT ON THE WARD AT THE PRESENT TIME. FOLLOW UP AS NEEDED FOR SERVICES WITH REGARDS TO NEPHROLOGY/DIALYSIS SERVICES. WORKING WITH MEDICAL STAFF WITH REGARDS TO MEDICARE ISSUES. (CHRONIC VS ACUTE ESRD DIAGNOSIS). [REDACTED]

Co-signed by: [REDACTED]

Note Type: Shift Nursing Assessment
 Note Time: 0735 21 Apr 1998
 Last Stored: 0750 21 Apr 1998
 Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT

NEUROLOGICAL

Location/Orientation	Alert & Oriented To Person, Place, and Time Follows Commands	Motor Strength	unable to move lower extremities but can move arms and hands but very weak
Pupils	PERRLA	Speech	intubated
Glascow Coma Score:			
Eyes Open To:	3	Best Motor Response:	6
		Best Verbal Response:	1
		Glascow Coma Score:	10

PULMONARY

Respiration ventilated, fio2 40%, rate 18, Chest Wall Expansion Bilateral And Equal tv 650, AC, PEEP OF 5
 Breath Sounds COURSE RHONCHI IN AIRWAYS, CLEAR TO SUCTIONING, DIMISHED IN BASES BILATERALLY

000057

Continued...

X Secretions MODERATE AMOUNT THICK CREAMY YELLOW

CARDIOVASCULAR

Heart Sounds <i>S1, S2</i>	Rhythm <i>Regular</i>	Ectopy <i>Occasional Unifocal PVC's</i>
All Extremities <i>Warm and Dry</i>	No X See below.	
Circulation/Perfusion <i>Cool</i>		Capillary Refill <i>Brisk - < 3 seconds</i>
Circulation/Perfusion <i>Cool</i>		Capillary Refill <i>Slow - > 3 seconds</i>
Circulation/Perfusion <i>Cool</i>		Capillary Refill <i>Brisk - < 3 seconds</i>
Circulation/Perfusion <i>Cool</i>		Capillary Refill <i>Slow - > 3 seconds</i>
Edema <i>4+ Very Deep, Present After 5 Minutes</i>	JVD	No X

GI

Abdomen *Taut Firm Distended Bowel Sounds Hypoactive*

X Tubes

#1 <i>Nasogastric</i>	Location <i>Left</i>	Draining To <i>CLAMPED</i>
Draining <i>Small Amount Brown</i>		
Irrigation <i>WATER WITH MEDS</i>		

GU

Urine Output *Foley draining Dark*

INTEGUMENTARY

Skin Color <i>Jaundice</i>	Skin Temp <i>Cool Clammy</i>	Integrity <i>See Below</i>
#1 X Area Location <i>MULTIPLE AREAS OF FASCIOTOMY</i>		
Dressing <i>BLEEDING FROM ALL AREAS</i>		

LINES

#1 X Periph. Line	Location <i>Right Hand</i>	Gauge <i>20</i>
	Appearance <i>Site clean and dry, without erythema</i>	
#1 X Arterial Line	Location <i>Radial</i>	
	Appearance <i>Clean & dry, without erythema.</i>	
#1 X Central Line	Type <i>RIGHT FEMOROL QUINTON</i>	Location <i>Right</i>
	Appearance <i>No redness, tenderness, swelling or drainage at site.</i>	
#2 X Central Line	Type <i>RIGHT IJ CORDIS WITH SWAN</i>	Location <i>Right</i>
	Appearance <i>No redness, tenderness, swelling or drainage at site.</i>	
#3 X Central Line	Type <i>LEFT IJ QUINTON</i>	Location <i>Left</i>
	Appearance <i>No redness, tenderness, swelling or drainage at site.</i>	

MISCELLANEOUS

Comments *PT SEDATED BUT AWAKES TO VERBAL STIMULI, WIFE PRESENT AT BEDSIDE THIS AM, PT DENIES PAIN AT THIS TIME, PT CONTINUES ON CVVH, CONTINUES TO RECIEVE MULTIPLE UNITS OF BLOOD PRODUCTS AND CONTINUES TO BLEED PROFUSELY FROM FASCIOTOMIES*

Note Type: **ICU Physician Note**

Note Time: **0949 21 Apr 1998**

Last Stored: **1259 21 Apr 1998**

Stored by: **[REDACTED]**

ICU DAILY PROGRESS NOTE

000058

Continued...

Date: 21APR98 ICU Day #: 3 Diagnosis: AER - IN DIC
HEPATORENAL SYNDROME
COMPARTMENT SYNDROME
S/P FASCIOTOMIES BLE

Prior 24 HR Events: -PT TAKEN TO OR YESTERDAY FOR GLUTEAL FASCIOTOMIES AND FURTHER DEBRIDEMENT OF NECROTIC MUSCLE; PT HAD EPISODES X2 OF AFIB C HYPOTENSION REQUIRING ELECTRO-CARDIOVERSION 100J W/ IMMEDIATE RESPONSE; PT HAD 1 MORE EPISODE OF AFIB C HYPOTENSION REQUIRING CARDIOVERSION 100J AND CONT. MASSIVE BLOOD TRANSFUSION W/GOOD RESPONSE. LEVOPHED NECESSARY TO MAINTAIN ADEQ. BP 10-30CC/HR
-PT CONT. TO RECEIVE MASSIVE AMTS. OF BLOOD PRODUCTS TO MAINTAIN HCT, BP, AS PT CONT. TO HAVE COAGULOPATHY, ON CVVHD W/ HEPARIN, MULT TRPIS TO OR FOR DEBRIDEMENT/PACKING OF FASCIOTOMIES.
-PT W/ EPISODE OF INC.PAP TO 46 THAT RESOLVED SPONTANEOUSLY; CXR S EVID OF ARDS PRESENTLY.

NEURO-PSYCH DNR Status: FULL CODE

Glasgow CS: 10 Orientation: ALERT AND ORIENTED Exam: PT FOLLOWS COMANDS; IS APPROPRIATE
WHEN SEDATION
LIGHTENED

X Scans/Studies: HEAD CTSCAN: NO EVID OF EDEMA OR HYDROCEPHALUS; READ AS NL BY RADIOLOGIST

X Sedation: INTERMITTANT VERSED X Analgesia: REMIFENTANIL
2MG IV FOR AMNESIA INFUSION 45CC/HR

Comments: PT IS AWARE AND ABLE TO FOLLOW COMMANDS, BUT APPEARS ADEQ. PAIN-CONTROLLED ON REMIFENTANIL INFUSION.
-STARTED INTERMITTANT VERSED 2MG IV FOR AMNESIA, EXTRA SECTION WHEN BEING MANIPULATED FOR NURSING CARE AND UNSTABLE EPISODES.
-WILL TRY TO GET HEADPHONES/MUSIC FOR PT TO AID IN FILTERING OUT STIMULI OF APPARATI IN ROOM AND SOOTHE PT.

CARDIOVASCULAR

BP: 133 / 59 HR: 104

Exam: TACHY, +S1S2 NO MRG APPRECIATED

Time	CVP	PAS	PAD	PCW	CO	CI	SVR	PVR
LATEST VALUES	10	69	25	7	6.40	2.74	725	225

Vasoactive Drips: #1 LEVOPHED 10CC/HR
.053MCG/KG/MIN

Comments: -PT HAS BEEN CONSISTENTLY TACHYCARDIC THROUGHOUT THE NIGHT, MAINTAINING 110-120'S
-PT HAD EPISODE X1 OF AFIB C HYPOTENSION IN MICU REQUIRING CARDIOVERSION 100J W/ GOOD RESPONSE (2 EPISODES IN OR RESPONSIVE TO 100J CARDIOVERSION)
-WILL CONT TO MONITOR FOR ADEQ.MAP'S >70, AND TITRATE LEVOPHED/GIVE BACK VOLUME, BLOOD PRODUCTS AS NECESSARY.

RESPIRATORY

ETT Size: 8.0 Date Placed: 18APR98

CXR: TUBES AND LINES ALL IN GOOD POSITION; ELEVATED, DEC.SINCE YESTERDAY R HEMIDIAPHRAGM; RESOLVING BLOOD IN ALVEOLI; MIN CHANGE FROM YESTERDAY

RR: 12 Exam: DIFFUSE CRACKLES LUNG FIELDS X On Ventilator X Show ABGs

-----Ventilator:-----

Time	Mode	Rate	Vt	PEEP	Peak	FiO2
LATEST VALUES	A/C	18/18	650.00	5.00	75.00	0.40

-----Spontaneous/Wean.Paramet:-----

Vt exp	PIP
700.00	38.20

pH	pCO2	pO2	a-SAT	(A-a)O2	BE
7.350	41.500	96.000	99	59.1	-8.000
				50	

000059

Continued...

Comments: PT DOING WELL FROM RESPIRATORY STANDPOINT THIS AM; 1 EPISODE OF INC.PAP IN EARLY AM TO 47 THAT RESOLVED SPONTANEOUSLY; CXR S EVID OF ARDS PRESENTLY.
-MOST RECENT ABG SHOWS 7.35/32/118/-8/98%/18, MUCH IMPROVED SINCE INCR.RATE TO 18
-VENT SETTINGS: A/C TV650 PEEP5 RATE18/18 FIO2 40%
-PT IS GIVING CONTROLLED BREATHS AS REMIFENTANIL IS @ APNEIC LEVELS FOR HIM; THIS IS ACCEPTABLE AS PT IS NOT IN A STABLE SETTING W/ CONT. RETURNS TO THE OR, ETC. AND HE STILL REMAINS AWARE AND ABLE TO FOLLOW COMANDS. WILL CONT TO MONITOR CLOSELY

HEME/COAG

Exam: PT W/ LG. FASCIOTOMIES X10 UP AND DOWN BLE INCLUDING GLUTEAL COMPARTMENTS, DRESSED IN KERLIX AND SEEKING SANGUINOUS DRAINAGE.
PT HAS POOLS OF BLOOD THAT NECESSITATE CONT. BED CHANGES AND TRANSFUSIONS
-BUE S EVID OF PETECHIAE, GROSS ACTIVE BLEEDING

Time	Hct	PLTS	PT	PTT	FIBR	Transfusions:	19APR98:
							13U PRBC'S
							7U FFP
							2-6PKS PLTS
							20PAR98:
							34U PRBC'S
							27U FFP
							7-6PKS PLTS
							20U CRYO

LATEST VALUES 21.0 54 18.5 52.3 163

Comments: PT HAS RECEIVED MULTIPLE BLOOD PRODUCTS W/ MINIMAL INC.IN HCT
-WILL CONT TO TRANSFUSE W/ BLOOD PRODUCTS AS NECESSARY; FULL APPROVAL FROM BLOOD BANK
GOALS: HCT-30 PLTS>35 FIBRINOGEN>100 PT<20

RENAL/FLUIDS/LYTES

IV FLUIDS/RATE: MULTIPLE BLOOD PRODUCTS; .45NS+BICARB AND NS REMIFENTANIL DRIP LEVOPHED DRIP TPN

Na: 139 K: 4.4 CL: 108 BUN: 8 CREAT: 2.6

Comments: I/O'S NOT ACCURATE CURRENTLY SECONDARY TO HI VOLUME INFLOW AND HIGH MAINTAINANCE OF PT CARE. ALSO, PT LOSSES ARE NOT ACCURATE DUE TO LG. AMTS OF BLOOD/VOLUME LOST THROUGH WEEPAGE FROM DRESSINGS ONTO BEDDING. COULD APPROX. THAT PT IS UP 20L.
-WILL CONT W/ CVVHD, BLOOD PRODUCT/FLUID RESUSCITATION AS NECESSARY.

METABOLIC/NUTRITION

BEE: 2500 SOURCE: TPN KCal/Kg 25 PROTEIN (gm/kg): 1.5

Gluc: 116 Alb: 1.8

Ca: 5.7 PO4: 4.8

Comments: TPN TO RESTART TODAY IN ATTEMPT TO RE-NOURISH THE PT AND COMBAT AGAINST FURTHER MUSCLE WASTING/AUTO-PROTEIN BREAKDOWN FOR ENERGY REQUIREMENTS. TPN WAS HELD YESTERDAY SECONDARY TO ACCESS SHORTAGE AND NECESSITY TO GIVE BLOOD PRODUCTS AS QUICKLY AS POSSIBLE.
-AS PT IS INTACT NEUROLOGICALLY AND RECENT H/O SEVERE MALNUTRITION, WILL START W/ FULL BAG AND MONITOR LABS AND CLINICAL ASSESSMENT CLOSELY.
-AS PT'S GUT IS STILL WORKING, WILL ATTEMPT ENTERAL FEEDINGS W/ NEPRO AND DEC.TPN AS NEPRO IS INC. WILL CONT TPN WHEN NEPRO TURNED OFF FOR TRIPS TO OR AND INTERIM PERIODS

GI/LIVER Exam: EDEMATOUS, NT +BS

SGOT: 1901 SGPT: 479 Alk Phos: 58 TBili: 7.5 LIPASE: 737
AMYLASE: 282

Comments: PT HAS GOOD BS AND ALTHOUGH DIFFICULT TO EXAMINE, NO EVID. OF MASSES
-PT TO START TPN TODAY AND WILL INITIATE ENTERAL FEEDS(NEPRO) TO GOAL 50CC/HR AND DEC.TPN AS TUBE FEEDS INC.
-PT TO GET PICC LINE BY IR TODAY/ ONCALL TO IR
-WILL KEEP TPN TO FS AFTER MIDNIGHT AS PT TO GO TO OR TOMORROW FOR ORTHO REDO

INFECTION

Antibiotics #1 UNASYN D#4
VANCOMYCIN D#2

000060

Continued...

TEMP/MAX: 98.0/95.9 Exam: PT HAS LG. FASCIOTOMIES BLE IN KERLIX DRESSINGS- NO EVID OF INFECTION/ERYTHEMA
 -LINES APPEAR C/D/I NO EVID. OF ERYTHEMA/INFECTION
 -PT ON ABX. PROPHYLAXIS DUE TO LARGE OPEN WOUNDS AND CONT.BLEEDING/DRAINAGE.
 -PT W/ EPISODES OF HYPOTHERMIA DOWN TO 93.0F SECONDARY TO COPIOUS INFUSIONS/TRANSFUSIONS
 -WILL PUT BLOOD AND CVED FLUID THROUGH WARMERS TO AID IN TEMP MAINTAINANCE AND WILL PLACE BAIR HUGGER ON PT
 -PT TO RECEIVE SPECIAL BED TO AID IN WICKING AWAY FLUID/BLOOD FROM PT'S BODY AND WARM AIR CONVECTION TO MAINTAIN BODY TEMP.

WBC/DIFF. (P,B,L,M,E) 9.1 16S 52B

SKIN/EXTREMITIES Decubiti NONE
 Pulses INTACT BUE Rash NONE Edema GENERALIZED BODY
 DOPPLER +BLE

TUBES/LINES
 Cen. Vein: RIJ PA Cath: D2
 CORDIS
 D4
 Arterial: L WRIST Foley: D4 NGT: D3
 D4

Comments: ALL LINES APPEAR C/D/I

Medications

Name

- #1 LEVOPHED DRIP
- NS &.45NS+BICARB
- RENIFENTANIL DRIP
- CARAFATE
- AMPHOGEL
- UNASYN
- VANCOMYCIN
- VERSED 2MG PRN
- D50 AMP PRN
- CACL AMPS PRN
- BLOOD PRODUCTS PRN

IMP/PLAN

Comment: AS PER SYSTEM ABOVE
 -DISCUSSED WITH TEAM ON ROUNDS

██████████ MD
 MICU Intern

Note Type: Progress Note (Nutrition Support)
 Note Time: 0956 21 Apr 1998
 Last Stored: 1027 21 Apr 1998
 Stored by: ██████████

PROGRESS NOTE

Source of Entry: Pharmacist
 Subject of Note: Nutrition Support

000061

Continued...

Text of Note:

Unable to start TPN b/c of access problems. Started today. Plan for OR tomorrow for debridement of fasciotomies. HD stopped last night. Now on CVVHD. His TPN will provide 2520 kcal/day and 135gm per day of hepatamine. Plan to start Nepro today with a goal of 50ml/hr. This regimen will provide 2400kcal/day and 0.8gm/kg/day of protein. Labs: gluc 65, BUN 7, SCr 2.6, Ca 5.7, PO4 5.3, albumin 1.8, Mg 1.4, LFT's remain elevated.

A/P: Appreciate the concern about protein in this patient with renal/hepatic failure, however his BUN is low and mental status intact. In all probability patient is hypercatabolic and will require multiple trips to the OR for debridement.

Recommendations:

1. Would consider using Impact enteral feeds starting at 25ml/hr and increasing as tolerated to a goal rate of 105ml/hr. This regimen will provide 2520 kcal/day and 140gm of protein/day.
2. Would monitor gastric residuals and elevate HOB to 30-45 degrees.
3. Would also monitor mental status, ammonia level and BUN.
4. Would agree with limiting protein to 0.8-1.2gm/kg/day if BUN and ammonia level rises significantly or patient experiences mental status changes.
5. If you plan to use Nepro, goal rate is 53ml/hr which provides 2540kcal/day and add 1 scoop promod qid to provide at least 1.2gm/kg/day while on dialysis.
6. If phos level rises while on enteral feeding, would add phos binder.
7. Can also consider adding lactulose if ammonia level rises.
8. Check triglyceride level.

Note Type: MD Progress Note
Note Time: 1050 21 Apr 1998
Last Stored: 1052 21 Apr 1998
Stored by: [REDACTED]

MD Progress Note

OTS: EVENTS OF PAST 24 HRS. NOTED. PT'S LFT'S FLUCTUATING, BUT MARKEDLY IMPROVED. Coag profile improved, although requires multiple units FFP, etc. due to operative debridements. Overall, appears liver is recovering and transplant not needed. Will continue to follow and list for OLTx if condition worsens.

Note Type: Shift Nursing Assessment
Note Time: 1313 21 Apr 1998
Last Stored: 1318 21 Apr 1998
Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State Sedated

NEUROLOGICAL

Location/Orientation Alert & Oriented To Person, Place, and Time Follows Commands
Motor Strength unable to move lower extremities but can move arms and hands but very weak

Pupils PERRLA
Speech intubated

Glasgow Coma Score:

Eyes Open To: 3 Best Motor Response: 5 Best Verbal Response: 1 Glasgow Coma Score: 9

PULMONARY

Respiration ventilated, fio2 40%, rate 18, Chest Wall Expansion Bilateral And Equal
tv 650, AC, PEEP OF 5

000062

Continued...

Breath Sounds	COURSE RHONCHI IN AIRWAYS, CLEAR TO SUCTIONING, DIMISHED IN BASES BILATERALLY	
X Secretions	MODERATE AMOUNT THICK CREAMY YELLOW	
CARDIOVASCULAR		
Heart Sounds	S1, S2	Rhythm Regular Ectopy Occasional Unifocal PVC's
All Extremities	Warm and Dry	No X See below.
Circulation/Perfusion	Cool	Capillary Refill Brisk - < 3 seconds
Circulation/Perfusion	Cool	Capillary Refill Slow - > 3 seconds
Circulation/Perfusion	Cool	Capillary Refill Brisk - < 3 seconds
Circulation/Perfusion	Cool	Capillary Refill Slow - > 3 seconds
Edema	4+ Very Deep, Present After 5 Minutes	JVD No X
GI		
Abdomen	Taut Firm Distended Bowel Sounds Hypoactive	
X Tubes		
#1	Nasogastric	Location Left Draining To TF
Draining	Small Amount Brown	
Irrigation	WATER WITH MEDS	
GU		
Urine Output	Foley draining Dark 1CC/HR	
INTEGUMENTARY		
Skin Color	Jaundice	Skin Temp Cool Clammy Integrity See Below
#1 X Area	Location MULTIPLE AREAS OF FASCIOTOMY	
Dressing	BLEEDING FROM ALL AREAS	
LINES		
X Periph. Line		
#1 X Arterial Line	Location Radial	Appearance Clean & dry, without erythema.
#1 X Central Line	Type RIGHT FEMOROL QUINTON	Location Right Appearance No redness, tenderness, swelling or drainage at site.
#2 X Central Line	Type RIGHT IJ CORDIS WITH SWAN	Location Right Appearance No redness, tenderness, swelling or drainage at site.
#3 X Central Line	Type LEFT IJ QUINTON	Location Left Appearance No redness, tenderness, swelling or drainage at site.
MISCELLANEOUS		
Comments	PT SEDATED BUT AWAKES TO VERBAL STIMULI, WIFE PRESENT AT BEDSIDE THIS AM, PT DENIES PAIN AT THIS TIME, PT CONTINUES ON CVVH, CONTINUES TO RECIEVE MULTIPLE UNITS OF BLOOD PRODUCTS AND CONTINUES TO BLEED PROFUSELY FROM FASCIOTOMIES	

Note Type: **Procedure-Insertion Note**
Note Time: **1459 21 Apr 1998**
Last Stored: **1501 21 Apr 1998**
Stored by: **[REDACTED]**

000063

Continued...

- PROCEDURE/INSERTION NOTE -

Type **Central line insertion**

Performed By: [REDACTED]

Supervised By:

Informed Consent/Counseling: YES **X** NO

I have discussed the condition, planned procedure, risks, benefits, alternatives with the patient/surrogate and they have agreed to proceed.

Comment: **Lt brachial vein PICC placed under imaging guidance with tip at cavoatrial junction. No complications.**

Indications **Venous Access**

Prep **Prepared & draped using aseptic technique**

Medications: **Lidocaine Topical**

Location **Left**

Pt. Response **Tolerated well**

Note Type: **Pastoral Service**
Note Time: **1537 21 Apr 1998**
Last Stored: **1537 21 Apr 1998**
Stored by: [REDACTED]

Pastoral Services & Assessment

Note Type: **Shift Nursing Assessment**
Note Time: **1600 21 Apr 1998**
Last Stored: **1933 21 Apr 1998**
Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State **Sedated**

NEUROLOGICAL

Location/Orientation **Alert Follows Commands** Motor Strength **UPPER EXTREMITIES WEAK AND LOWER EXTREMITIES UNABLE TO ASSESS BILATERAL.**

Pupils **PERRLA Sluggish Sluggish** Speech **VENTILATED VIA ETT.**

Glascow Coma Score:

Eyes Open To: **4** Best Motor Response: **5** Best Verbal Response: **1** Glascow Coma Score: **10**

PULMONARY

Respiration **Normal** Chest Wall Expansion **Bilateral And Equal**

Breath Sounds **Clear Bilaterally**

X Secretions **Large Amount Copious Think**

CARDIOVASCULAR

Heart Sounds **S1, S2** Rhythm **Regular** Ectopy **None**

All Extremities Warm and Dry No **X** See below.

Continued...

All Peripheral Pulses Strong and Equal	No X See below.
Circulation/Perfusion Cool Dry	Capillary Refill Slow - > 3 seconds
LUE Pulses Weak	
Circulation/Perfusion Cool Pale	Capillary Refill Slow - > 3 seconds
LLE Pulses Doppler	
Circulation/Perfusion Cool Dry	Capillary Refill Slow - > 3 seconds
RUE Pulses Weak	
Circulation/Perfusion Cool Pale	Capillary Refill Slow - > 3 seconds
RLE Pulses Doppler	
Edema 4+ Very Deep, Present After 5 Minutes Generalized	JVD No X

GI

Abdomen Firm Bowel Sounds Hypoactive X 4 Quadrants
X Tubes
 #1 Orogastric Location Oral Draining To NEPHRO TUBE FEEDING CONTINUOUSLY.

GU

Urine Output MAINTAINED VIA CATH, NOT MAKING ANY URINE THIS SHIFT. Foley Insert Date 21APR.98

INTEGUMENTARY

Skin Color Pale Skin Temp Dry Cool Integrity Intact

LINES

X Periph. Line

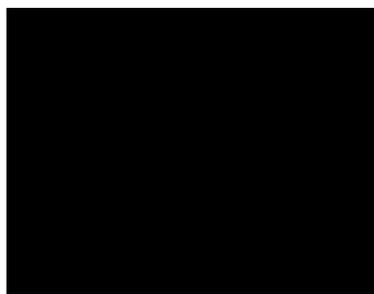
#1 X Arterial Line	Location Radial	Insert Date 21APR98
	Appearance Clean & dry, without erythema.	
#1 X Central Line	Type PICC	Location left antecubital fossa
	Insert Date 21Apr98	Appearance No redness, tenderness, swelling or drainage at site.
#2 X Central Line	Type PA with Swan	Location Right IJ IJ
	Insert Date 21Apr98	Appearance No redness, tenderness, swelling or drainage at site.
#3 X Central Line	Type Quinton	Location Left IJ
	Insert Date 21Apr98	Appearance No redness, tenderness, swelling or drainage at site.

Note Type: Progress Note (progress)
Note Time: 1607 21 Apr 1998
Last Stored: 1608 21 Apr 1998
Stored by: [REDACTED]

PROGRESS NOTE

Source of Entry: Nursing
Subject of Note: Progress Note

Note Type: Progress Note (GASTROENTEROLOGY)
Note Time: 1612 21 Apr 1998
Last Stored: 1646 21 Apr 1998
Stored by: [REDACTED]



000065

PROGRESS NOTE

Source of Entry: GASTRO

Subject of Note: Progress Note

Text of Note: THIS IS A 33 Y/O BM ADMITTED ON 16 APRIL 97 S/P COLLAPSING DURING APFT. AFTER HIS COLLAPSE, THE PT WAS HYPOTENSIVE/ UNRESPONSIVE. PT WAS SUBSEQUENTLY INTUBATED, AND LATER A/E TO [REDACTED] FOR FURTHER EVAL. UPON INITIAL EVAL, PT WAS FOUND TO HAVE MASSIVE RHABDOMYOLYSIS. HOSPITAL COURSE SO FAR HAS BEEN C/B ARF REQUIRING DIALYSIS/ULTRAFILTRATION, SEVERE COAGULOPATHY, HYPOTENSION REQUIRING PRESSORS, COMPARTMENT SYNDROME S/P EXTENSIVE BILAT FASCIOTOMIES, MULTIPLE TRANSFUSIONS, SEVERE ANEMIA, SEVERE TRANSAMINITIS WITH WITH AST AS HIGH AS 8512, AND ALT 4157. GI WAS ASKED TO FOLLOW PT ALONG IN VIEW OF HIS SEVERE HEPATIC DAMAGE. ETIOLOGY OF HIS MARKED INCREASE IN TRANSAMINASES IS DUE TO SEVERE HEPATIC ISCHEMIA/ RHABDOMYOLYSIS. HEPATIC DYSFUNCTION APPEARS TO OCCUR IN ABOUT 25% OF PTS WITH RHABDOMYOLYSIS. THE PATHOGENESIS OF THIS ABNORMALITIES IS PROBABLY MULTIFACTORIAL (HYPERPYREXIA, HYPOTENSION, AND PROTEASES RELEASED FROM INJURED MUSCLE). HIS ACUTE MARKED INCREASE IN TRANSAMINASES PEAKING WITHIN 48-72 HRS OF THE INITIAL HYPOTENSIVE INSULT, F/U BY GRADUAL IMPROVEMENT FIT VERY WELL WITH THE DX OF HEPATIC ISCHEMIA. THE TREATMENT OF ISCHEMIC HEPATITIS/ RHABDO INDUCED HEPATIC DAMAGE IS TX OF THE UNDERLYING DISORDER, AS WELL AS INTENSIVE SUPPORTIVE CARE LIKE YOU ARE DOING. ALTHOUGH HEPATIC ISCHEMIC/ RHABDO INJURY IS USUALLY REVERSIBLE, LIVER TRANSPLANTATION HAS BEEN PERFORMED FOR CASES OF SEVERE FHF.

Note Type: MD Progress Note (Nephrology Fellow)
Note Time: 2012 21 Apr 1998
Last Stored: 2023 21 Apr 1998
Stored by: [REDACTED]

MD Progress Note

Nephrology Fellow

Metabolically more stable, tolerating CVVHD well

IMP

- ARF 2nd rhabdomyolysis: remains anuric. Metabolically less labile esp wrt to potassium removal requirements. K=4-4.5, HCO3=low 20s durig day. Plan to continue CVVHD with dialysis against K=3 bath and replacement fluids including Ca and HCO3.
-liver failure: ? showing some slight improvements in enzymes, although still coagulopathis requiring large-volume blood product support.
-s/p fasciotomies: metabolically more stable which may indicate less of an active necrosis burden. Still with porofuse bleeding and large requirement for blood products. May be returning to OR tomorrow for exploration and possible re-debridement.

REC

- continue CVVHD at present rates
-follow Ca, Mg and suuplment as needed
-agressive blood product support as you are doing
-will consider intraoperative conventional dialysis if pt returns to OR tomorrow

Nephrology Service

Note Type: Shift Nursing Assessment
Note Time: 2117 21 Apr 1998
Last Stored: 2134 21 Apr 1998
Stored by: [REDACTED]

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

000066

Continued...

Behavior/Emotional State *Sedated*

NEUROLOGICAL

Location/Orientation *Follows commands, yes/no answers questions.* Motor Strength *Upper extremities weak, able to wiggle toes.*

Pupils *PERRLA* Speech *Intubated*

Glascow Coma Score:

Eyes Open To: *4* Best Motor Response: *6* Best Verbal Response: *1* Glascow Coma Score: *11*

PULMONARY

Respiration *Ventilated, AC mode, see orders* Chest Wall Expansion *Bilateral And Equal for settings.*

Breath Sounds *Clear With Diminished Bases Bilaterally*

CARDIOVASCULAR

Heart Sounds *S1, S2* Rhythm *Tachycardic* Ectopy *None*

All Extremities Warm and Dry No *X* See below.

All Peripheral Pulses Strong and Equal No *X* See below.

Circulation/Perfusion *Warm and Dry Pale* Capillary Refill *Brisk - < 3 seconds*

LUE Pulses *Radial Weak*

Circulation/Perfusion *Cool Dry Pale* Capillary Refill *Slow - > 3 seconds*

LLE Pulses *Doppler Dorsalis Pedis Posterior Tibial*

Circulation/Perfusion *Warm and Dry Pale* Capillary Refill *Brisk - < 3 seconds*

RUE Pulses *Radial Weak*

Circulation/Perfusion *Cool Dry Pale* Capillary Refill *Slow - > 3 seconds*

RLE Pulses *Doppler Dorsalis Pedis Posterior Tibial*

Edema *4+ Very Deep, Present After 5 Minutes* JVD No *X*
Bilateral Bilateral

GI

Abdomen *Taut Distended Non-Tender Bowel Sounds Active X 4 Quadrants*

X Tubes

#1 Nasogastric Location *Oral* Draining To *infusing nepro*

GU

Urine Output *foley, no urine output*

INTEGUMENTARY

Skin Color *Pale* Skin Temp *Uppers warm lowers cool, all dry* Integrity *See Below*

#1 X Area Location *Lower extremities* Type/Description *Faschiotamias*

Dressing *Soiled wit blood*

Drainage *Large amount of sanguinous*

LINES

#1 X Arterial Line Location *Radial*
Apperance *Clean & dry, without erythema.*

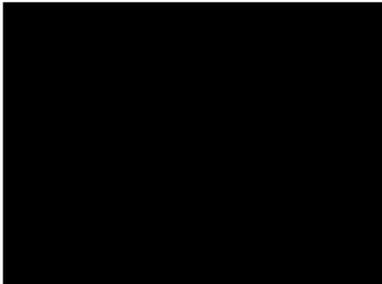
#1 X Central Line Type *PICC* Location *Left Brachial*
Insert Date *21APR98* Apperance *No redness, tenderness, swelling or drainage at site.*

#2 X Central Line Type *Quinton* Location *Left IJ*

000067

Continued...

	Insert Date	Appearance	<i>No redness, tenderness, swelling or drainage at site.</i>
#3 X Central Line	Type <i>Quinton</i>	Location	<i>Right Femoral</i>
	Insert Date	Appearance	<i>No redness, tenderness, swelling or drainage at site.</i>
#4 X Central Line	Type <i>Swan with cordis</i>	Location	<i>Right IJ</i>
	Insert Date	Appearance	<i>No redness, tenderness, swelling or drainage at site.</i>
MISCELLANEOUS			
Comments <i>ETT 27 at lip. Wife in and talking with pt and physicians. NO questions, left for night.</i>			



000068

Note Type: Shift Nursing Assessment
Note Time: 0011 22 Apr 1998
Last Stored: 0018 22 Apr 1998
Stored by: [REDACTED]

0011 22 Apr 1998

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State *Sedated*

NEUROLOGICAL

Location/Orientation *Lethargic Follows Commands* Motor Strength *Upper extremities weak, able to wiggle toes.*
Sedated

Pupils *Left Right Sluggish* Speech *Intubated*

PULMONARY

Respiration *Ventilated, AC mode, see orders for settings.* Chest Wall Expansion *Bilateral And Equal*

Breath Sounds *Clear With Diminished Bases Bilaterally* Rhonchi *prior to suctioning*

X Secretions *Large Amount Thick Yellow Small Amount Thin Clear*

CARDIOVASCULAR

Heart Sounds *S1, S2* Rhythm *Tachycardic* Ectopy *None*

All Extremities *Warm and Dry* No X See below.

All Peripheral Pulses *Strong and Equal* No X See below.

Circulation/Perfusion *Warm and Dry Pale* Capillary Refill *Brisk - < 3 seconds*

LUE Pulses *Radial Weak*

Circulation/Perfusion *Cool Dry Pale* Capillary Refill *Slow - > 3 seconds*

LLE Pulses *Doppler Dorsalis Pedis Posterior Tibial*

Circulation/Perfusion *Warm and Dry Pale* Capillary Refill *Brisk - < 3 seconds*

RUE Pulses *Radial Weak*

Circulation/Perfusion *Cool Dry Pale* Capillary Refill *Slow - > 3 seconds*

RLE Pulses *Doppler Dorsalis Pedis Posterior Tibial*

Edema *4+ Very Deep, Present After 5 Minutes* JVD No X
Bilateral Bilateral

GI

Abdomen *Firm Distended Tender Bowel Sounds Absent*

X Tubes

#1 *Nasogastric* Location *Oral* Draining To *Low Intermittent Suction*

Draining *Large Amount*

GU

Urine Output *foley, no urine output*

INTEGUMENTARY

Skin Color *Pale* Skin Temp *Uppers warm lowers cool, all dry* Integrity *See Below*

#1 X Area Location *Lower extremities* Type/Description *Faschiotamies*

Dressing *Soiled wit blood*

Drainage *Large amount of sanguinous*

LINES

#1 X Arterial Line Location *Radial*

000069

Continued...

000070

	Appearance Clean & dry, without erythema.	
#1 X Central Line	Type PICC Insert Date 21APR98	Location Left Brachial Appearance No redness, tenderness, swelling or drainage at site.
#2 X Central Line	Type Quinton Insert Date	Location Left IJ Appearance No redness, tenderness, swelling or drainage at site.
#3 X Central Line	Type Quinton Insert Date	Location Right Femoral Appearance No redness, tenderness, swelling or drainage at site.
#4 X Central Line	Type Swan with cordis Insert Date	Location Right IJ Appearance No redness, tenderness, swelling or drainage at site.

MISCELLANEOUS

Comments **ETT 27 at lip. Increasing blood from LLE. MD aware, ortho in and redressed LLE. Episode of desat, abg sent, fio2 increased to 50%.**

Note Type: **Shift Nursing Assessment**
 Note Time: **0446 22 Apr 1998**
 Last Stored: **0451 22 Apr 1998**
 Stored by: **[REDACTED]**

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State **Sedated**

NEUROLOGICAL

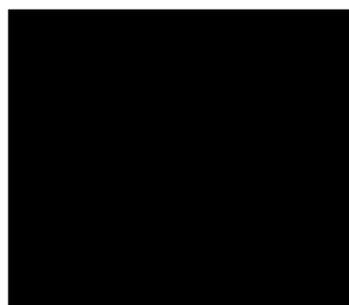
Location/Orientation **Lethargic Follows Commands** Motor Strength **Upper extremities weak, able to wiggle toes.**
Sedated
 Pupils **Left Right Sluggish** Speech **Intubated**

PULMONARY

Respiration **Ventilated on SINV, see orders for settings** Chest Wall Expansion **Bilateral And Equal**
 Breath Sounds **Clear With Diminished Bases Bilaterally**
 X Secretions **Small Amount Thin Clear**

CARDIOVASCULAR

Heart Sounds **S1, S2** Rhythm **Tachycardic** Ectopy **None**
 All Extremities **Warm and Dry** No X See below.
 All Peripheral Pulses **Strong and Equal** No X See below.
 Circulation/Perfusion **Warm and Dry Pale** Capillary Refill **Brisk - < 3 seconds**
 LUE Pulses **Radial Weak**
 Circulation/Perfusion **Cool Dry Pale** Capillary Refill **Slow - > 3 seconds**
 LLE Pulses **Doppler Dorsalis Pedis Posterior Tibial**
 Circulation/Perfusion **Warm and Dry Pale** Capillary Refill **Brisk - < 3 seconds**
 RUE Pulses **Radial Weak**
 Circulation/Perfusion **Cool Dry Pale** Capillary Refill **Slow - > 3 seconds**
 RLE Pulses **Doppler Dorsalis Pedis Posterior Tibial**
 Edema **4+ Very Deep, Present After 5 Minutes** JVD **No X**
Bilateral Bilateral



000070

Continued...

GI

Abdomen *Firm Distended Tender Bowel Sounds Absent*

X Tubes

#1 *Nasogastric* Location *Oral*

GU

Urine Output *Foley present, only few cc this shift*

INTEGUMENTARY

Skin Color *Pale* Skin Temp *Uppers warm lowers cool, all dry* Integrity *See Below*

#1 **X** Area Location *Lower extremities* Type/Description *Faschiotamies*
Dressing *Soiled wit blood*
Drainage *Large amount of sanguinous*

LINES

#1 X Arterial Line	Location <i>Radial</i>	Apperance <i>Clean & dry, without erythema.</i>
#1 X Central Line	Type <i>PICC</i> Insert Date <i>21APR98</i>	Location <i>Left AC</i> Appearance <i>No redness, tenderness, swelling or drainage at site.</i>
#2 X Central Line	Type <i>Quinton</i> Insert Date	Location <i>Left IJ</i> Appearance <i>No redness, tenderness, swelling or drainage at site.</i>
#3 X Central Line	Type <i>Quinton</i> Insert Date	Location <i>Right Femoral</i> Appearance <i>No redness, tenderness, swelling or drainage at site.</i>
#4 X Central Line	Type <i>Swan with cordis</i> Insert Date	Location <i>Right IJ</i> Appearance <i>No redness, tenderness, swelling or drainage at site.</i>

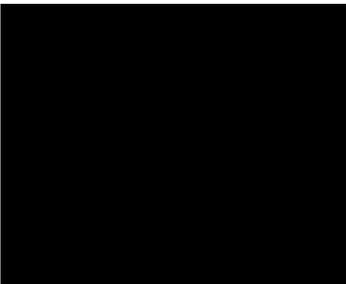
MISCELLANEOUS

Comments *Episode of increased peak pressures. Unrelieved with suctioning, not biting on ETT. MD assess. Good BS bilat with bag ventilation. Ventilation mode changed to SIMV. Pt left undisturbed as much as possible last night to allow time for sleep.*

Note Type: *Progress Note (SHIFT)*
Note Time: *0651 22 Apr 1998*
Last Stored: *0709 22 Apr 1998*
Stored by: 

PROGRESS NOTE

Source of Entry: *Nursing*
Subject of Note: *Progress Note*
Text of Note: *Pt kept MAP>70 with levophed between 0 to 8mcg/min. Able to Doppler posterior tibial and pedal pulses q2hrs, extrem cool and pale with delayed cap refill. Bleeding through dressings on LE. All IV access small amount of blood at site. Dsgs changed on Pic line, a-line, and left IJ cordis. Received multiple blood products per order sheet. Temp hypothermic despite warmer, bed temp >99, and warmed IVF and blood products. Peak pressures on ventilator increased from 40 - 60 last night. Suctioned for large amount of thick yellow secretions earlier this shift. When peak pressures increased, no secretions from ETT. Lungs clear. Pt not biting on tube. CVP increased to 15. Able to bag ventilate without difficulty. Switched to SIMV ,peak pressures 40's.*



000071

Note Type: **ICU Physician Note**
 Note Time: **0735 22 Apr 1998**
 Last Stored: **1704 22 Apr 1998**
 Stored by: **[REDACTED]**

ICU DAILY PROGRESS NOTE

Date: **22APR98** ICU Day #: **4** Diagnosis: **AER - IN DIC**
HEPATORENAL SYNDROME
COMPARTMENT SYNDROME
S/P FASCIOTOMIES BLE

Prior 24 HR Events: **-PLEASE REFER TO ATTENDING NOTE BY DR. [REDACTED] MD**

NEURO-PSYCH

Glasgow CS: **9**

CARDIOVASCULAR

BP: **106 / 40** HR: **96**

Time CPK

LATEST VALUES **8**

Time	CVP	PAS	PAD	PCW	CO	CI	SVR	PVR
LATEST VALUES	11	52	19	14	6.40	2.74	725	225

RESPIRATORY

RR: **18**

LATEST VALUES

HEME/COAG

Time	Hct	PLTS	PT	PTT	FIBR
LATEST VALUES	28.7	66	17.1	>100	276

.0

RENAL/FLUIDS/LYTES

IV FLUIDS/RATE:

Na: **139** K: **3.2** CL: **104** BUN: **12** CREAT: **2.2**

METABOLIC/NUTRITION

Gluc: **122** Alb: **2.5**

Ca: **7.5** PO4: **4.5**

Comments: \

GI/LIVER

SGOT: **2032** SGPT: **600** Alk Phos: **118** TBili: **8.6**

Note Type: **Shift Nursing Assessment**
 Note Time: **0946 22 Apr 1998**
 Last Stored: **0954 22 Apr 1998**
 Stored by: **[REDACTED]**

SHIFT NURSING ASSESSMENT

PSYCHOSOCIAL

Behavior/Emotional State **Sedated**

NEUROLOGICAL

Location/Orientation **Alert & Oriented To Person, Place, and Time Follows Commands** Motor Strength **RUE RLE LUE LLE Weak**

Pupils **PERRLA Left Right Brisk** Speech **INTUBATED**

Glasgow Coma Score:

Eyes Open To: **3** Best Motor Response: **5**

000072

Continued...

PULMONARY

Respiration *MECH VENT* Chest Wall Expansion *Bilateral And Equal*
Breath Sounds *Clear Bilaterally*
X Secretions *Moderate Amount Moderate Amount Think Yellow*

CARDIOVASCULAR

Heart Sounds *S1, S2* Rhythm *Regular* Ectopy *None*
All Extremities Warm and Dry Yes **X**
All Peripheral Pulses Strong and Equal Yes **X**
Edema *4+ Very Deep, Present After 5 Minutes* JVD No **X**
Pitting Generalized

GI

Abdomen *Firm Distended Bowel Sounds Hypoactive X 4 Quadrants*
X Tubes
#1 *Orogastric* Location *Oral* Draining To *CLAMPED*
Draining *No Drainage noted*
Irrigation *NONE*

GU

Urine Output *Foley draining Amber*

INTEGUMENTARY

Skin Color *Normal for Race* Skin Temp *Dry Cool* Integrity *See Below*
#1 **X** Area Location *Right Left Leg* Type/Description *Incision*
Dressing *Soiled Gauze Packing* Drains *NONE*
Drainage *Copious Amount Foul Odor Serosanguineous Red*

LINES

#1 **X** Arterial Line Location *Radial* Insert Date ?
Apperance *Clean & dry, without erythema.*

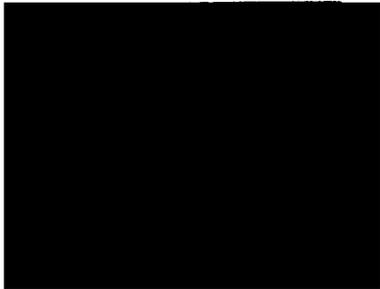
#1 **X** Central Line Type *PICC Dual Lumen* Location *Left Brachial*
Insert Date *21 april 1998* Appearance *No redness, tenderness, swelling or drainage at site. Dressing clean, dry and intact.*

#2 **X** Central Line Type *DL QUENTIN CATH* Location *Right Femoral*
Insert Date ? Appearance *No redness, tenderness, swelling or drainage at site. Dressing clean, dry and intact.*

#3 **X** Central Line Type *DL QUENTIN CATH* Location *Left IJ*
Insert Date ? Appearance *No redness, tenderness, swelling or drainage at site. Dressing clean, dry and intact.*

#4 **X** Central Line Type *PA* Location *Right Subclavian*
Insert Date ? Appearance *No redness, tenderness, swelling or drainage at site. Dressing clean, dry and intact.*

Note Type: **Pastoral Service**
Note Time: **1407 22 Apr 1998**
Last Stored: **1407 22 Apr 1998**
Stored by: 



000073

Pastoral Services & Assessment

Note Type: MD Progress Note
Note Time: 1545 22 Apr 1998
Last Stored: 1604 22 Apr 1998
Stored by: [REDACTED]

MD Progress Note

Case discussed with Dr. [REDACTED]. The patient developed massive bleeding and hypotension this am. CVVH-D was discontinued, although ACT never exceeded 230 sec, and heparin infusion rate did not exceed 500 units/hr. He is hypotensive, and is ventilating poorly, with a significant mixed respiratory/metabolic acidosis. At present we will attempt to carry out hemodialysis, if the patient is deemed sufficiently stable by the MICU team, for control of acidosis.

Note Type: Progress Note (progress)
Note Time: 1625 22 Apr 1998
Last Stored: 1653 22 Apr 1998
Stored by: [REDACTED]

PROGRESS NOTE

Source of Entry: Nursing
Subject of Note: Progress Note

Text of Note: Summary of shift events (0700-1545): Pt with hypotensive episode at approximately 1030 hrs. Pt received PRBC's, 25% Albumin boluses, NS litre boluses and Levophed increased to keep MAP's above 60. Bright red blood noted on RLE on groin area. Pressure applied to LLE and RLE-pt soaked through abd pads, 4x4's and pressure dressings. Ortho called. Ortho changed and reinforced dressings to LE bilaterally. LLE quadriceps region with 600c's EBL. After dressings to LE completed, pt became hypotensive and bradycardic. Pt received numerous PRBC's, FFP's, Plts, Cryoprecipitate, 25% Albumin and NS boluses. Pt required several bouts of Atropine, Epinephrine, CaCl amps, D50 ampxl and Bicarb amps. Chest compressions performed x3 episodes of PEA. Pulses checked via Doppler. Pt synchronized cardioversion with 100 joules of energy X1 for PSVT dysrhythmia. Pt tcp paced and transvenous paced X1. Pt developed tension hemopneumo thorax bilaterally. General surgery placed bilateral chest tubes with large amounts of serosanguinous fluid draining immediately into collection containers. CVVH/D off since 1030 hrs.

Note Type: [REDACTED] Attending Note
Note Time: 1629 22 Apr 1998
Last Stored: 1658 22 Apr 1998
Stored by: [REDACTED]

Attending Physician Progress Note

000074

Continued...

██████████ has suffered a significant decline in his condition today. Although the precipitant is not clear to me, he has suffered massive hemorrhage, initially from his fasciotomy wounds, but eventually from multiple sites...to include the lungs, pleural space, catheter sites, and probably the retroperitoneum. We have had an ongoing ACLS resuscitation for the past 5 hours. HE has demonstrated bradycardias, tachycardias, and PEAK. We have given him a total of 18 units PRBC, 9 units of FFP, 22 Units Cryo; 8 6 packs of platelets, 1600cc 25% albumin, and 7 liters of saline. HE was given a total of 50mg of protamine to correct his PTT. He received atropine, epinephrine, Ca, NaHCO3, glucose as needed. A chest tube was placed on each side with drainage of serous then bloody fluid. He had a bedside US of the belly which did not reveal any significant blood in the peritoneum (although the retroperitoneum could not be imaged). He was cardioverted at 100J for Afib with RVR with good response. We attempted to place a transvenous pacer with good capture, but no appreciable change in hemodynamics. With all of this he has become incredibly edematous. His lung compliance is extremely poor, and we have been unable to oxygenate or ventilate him for the past hour (despite constant manual bagging). We have discussed this with Mrs. ██████████ who wishes that her husband not suffer any more unnecessarily. Therefore we have placed him on maximum ventilatory support (although this is only getting us saturations in the 60's), and have continued his remifentanyl and levophed. The family is all in the room with him. Mrs. ██████████ would like for things to take their natural course, and we will not actively intervene should he begin to die. We will support Mrs. ██████████ and her family in any way possible.

Note Type: MD Progress Note
Note Time: 1723 22 Apr 1998
Last Stored: 1738 22 Apr 1998
Stored by: ██████████

MD Progress Note

GENERAL SURGERY CONSULTATION
HPI: 33 YO BL. MALE COLLAPSED AFTER PT TEST ON 16 APRIL, AT ██████████ HOSPITAL, HYPOTENSIVE, HYPERPYREXIA, INTUBATED, HEAD CT, IVF AND TRANSFERRED TO ██████████ WHERE HE WAS FOUND TO HAVE REABDOMYOLYSIS. HAD SUBSEQUENT RENAL FAILURE, LIVER FAILURE AND COAGULOPATHY. HE HAD BILATERAL LOWER EXTR. COMPARTMENT SYNDROMES WITH SUBSEQUENT FASCIOTOMIES INCLUDING THE GLUTEALS. OVER THE LAST 24 HOURS TUBE FEEDS WERE STARTED. HIS ABD. BECAME DISTENDED AND BOWEL SOUNDS WERE NOT PRESENT THIS AM. HE ALSO BECAME HYPOTENSIVE AND BRADYCARDIC AFTER A DRESSING CHANGE, WAS CARDIOVERTED FROM A PSVT AS WELL. GEN. SURGERY IS CONSULTED TO EVAL HIS ABD.

T=94, P=98 90/78
INTUBATED, PARALYZED, SEDATED
LUNGS CTA BILAT
ABD": NO SCARS, HYPOACTIVE BS, DISTENDED
RECTAL NO MASSES, NO HEME

PT IS GETTING CRYO, FFP AND BLOOD NOW AND HAS HAD A MASSIVE BLOOD PRODUCT REQUIREMENT
SIG LABS: LACT=16, HCT=26, PLT=42, AST=1614, ALT=650, TB=8.8, CPK=155,989, BUN=12, CRT=2.6
7.22/44/99/-9/18 PT=16.9 PTT=68

HAS BEEN ON CARAFATE, AMPHOGEL, AND IS CURRENTLY ON LEVOPHED

NGT LAVAGED CLEAR
LAT DECUB SHOWED NO FREE AIR

A/P: DISTENDED ABD. IN PT WITH RENAL FAILURE, COAGULOPATHY AND ACTIVE EBL OF 500CC/HR FROM FASCIOTOMIES.
NO INDICATION FOR RAD. STUDIES, OR SURGICAL INTERVENTION IN THIS VERY ILL MAN, CONT. TO RESUCCITATE AS YOU ARE DOING WE WILL CONT. TO FOLLOW CLOSELY

██████████ MD

Note Type: MD Progress Note
Note Time: 1751 22 Apr 1998
Last Stored: 1756 22 Apr 1998
Stored by: ██████████

000075

MD Progress Note

Resident Death Note

After greater than 6 hours of resuscitation to include the use of massive amounts of blood products, albumin, vasopressors, fluid, electrolyte replacement, respiratory support (ventilator, bilateral chest tubes) the pt was pronounced dead at 1725 hours on 22 April 1998. The patients wife was present at the bedside and all efforts to make the pt comfortable were employed. The pt was found to have no sponateous respirations, no palpable or dopplerable pulses, and no response to noxious stimuli. The chaplin was notified at the time of the pt's death.

Note Type: Progress Note (progress)
Note Time: 1939 22 Apr 1998
Last Stored: 1941 22 Apr 1998
Stored by: [REDACTED]

PROGRESS NOTE

Source of Entry: Nursing

Subject of Note: Progress Note

Text of Note: After further discussion with wife, all efforts to were discontinued, pt with placed back on the ventilator, monitor shut off and wife stayed at bedside til the pts time of death. pt was declared dead at 1725 per the md, post mortom care provided.

000076

Continued...

Consultation Report: CC: 33 y.o. M presenting with acute renal failure

HPI: No sig PMHx, pt collapsed yesterday afternoon after completing run for PT test. Per pt's wife had been crash-dieting for several days prior in order to make weight, although no apparently diuretic or laxative use. Intubated in ER, EKG initially felt to show a-flutter but later ready as sinus tach @180. Ct head negative. Initial labs sig for BUN/Cr = 9/2.3, HCO3=5, K=4.8, Hct=51.7, ABG=7.33/28/113. Place on IVF @100 ml/hr and transferred to CCU. Bedside echo indicated nl LVSP. Urine noted to be dark and dip positive for large blood with only moderate RBCs. CPK > 9999. Started on bicarbonate drip and volume repletion for presumed rhabdomyolysis.

PMHx: none
PSEHx: none
Outpt Meds: Vit C
All: NKDA

KXAM

Gen: young, slightly obese BM, intubated, sedated but arousable, not responding appropriately to commands

VS: T_a 101.1 BP 128/83 P 102, MAP=104
I/O = net 8.1 liters up since admission
SaO₂=98-99% on 35% F_iO₂, PEEP/PS =5/0

HEENT: PERL

Pul: CTA bilat, no rubs/wheezes
Cor: tachy RR, no m/r/g
Abd: distended, +BS, nontender, no HSM
Ext: no edema, distal pulses intact, nontender
Neuro: moves 4 exts spontaneously

LABS

BUN/Cr = 14/2.8, K=3.9, HCO3=18
Ca/Mg/Phos=9.0/3.9/1.7
ABG = 7.3/37/236

U/A by me = 1.007/5.0, 2-3+ protein, SSA > 100 mg%, large blood, negative glucose/ketones/leuk esterase
sediment = 5-10 muddy brown casts, few fine granular and hyaline casts, 10-20 WBC, 0-5 RBC, no lipid

IMPRESSIONS

-acute renal failure, nonoliguric, secondary to myoglobin-induced acute tubular necrosis (rhabdomyolysis)
-non anion-gap metabolic acidosis

DISCUSSION

Clinical presentation c/w classic presentations of rhabdo from severe muscle exertion. No evidence of underlying baseline renal disease although cannot rule out definitively at this time. The low-normal K with severe acidosis suggest that his potassium stores may be extremely depleted. The low phos unmasked with volume repletion suggests that hypophosphatemia may have been a contributing etiology.

Treatment currently consists of aggressive volume repletion first and alkalization of urine second. Given his probable volume depletion prior to the run, his size, and the possibility of fluid sequestration in damaged muscle, estimate that he could easily have volume deficit in 10-20 liter range.

Current urine pH of 5.0 indicates that present alkalization rate is inadequate. Would not favor use of mannitol or continued use of diuretic while still volume-depleted.

RECOMMENDATIONS

-aggressive iv fluid hydration with NS bolus, would push to total infusion of up to 10 liters/24 hrs as limited by O₂ sats
-alkalinize urine to pH > 6.5 with additional maintenance IVF of NaHCO₃ 2 amps in 1 liter 1/4-NS @ 200 ml/hr
-hold further furosemide
-follow P₁, P₂, urine pH q 4 hrs with careful attention to potassium and phosphate levels
-avoid nephrotoxins to include NSAIDs, aminoglycosides, intravenous contrast dye
-dose meds for estimated CrCl < 10 ml/min

Nephrology Service

000078

Note Type: █████ Consultation Form (hem/onc consult)
Note Time: 1154 18 Apr 1998
Last Stored: 1214 18 Apr 1998
Stored by: █████

Consultation Sheet

To: **Hem/Onc** From: **CCU** Date of Request: **18APR1998**
Reason for Request: **33 y/o AD 03 with acute exertional rhabdomyolysis complicated by acute renal failure, now with evidence of DIC. No known active bleeding. Considering FFP infusion given markedly elevated PT, TT, low fibrinogen.**
Provisional Diagnosis: **Rhabdomyolysis, DIC v. acute liver failure**
Place of Consultation: **Bedside** Type: **Today**

Note Type: █████ Consultation Form
Note Time: 1003 19 Apr 1998
Last Stored: 1013 19 Apr 1998
Stored by: █████

Consultation Sheet

To: **MICU** From: **OTS** Date of Request: **19 APR 98**
Reason for Request: **R/O Fulminant Hepatic Failure ?Liver transplant**
Provisional Diagnosis: **Rhabdomyolysis**
Place of Consultation: **Bedside** Type: **Today**
Record Reviewed: **X Yes** Patient Examined: **X Yes**
Consultation Report: **33 yo m collapsed after PT test at █████ Seen in MICU intubated DIC and elevated LFT's, ?FHF due to rhabdomyolysis. Pt had severely dieted two weeks prior to PT test. Transferred to MICU from CCU when became hypotensive this AM. PT now on Hemodialysis, anuric. LFT's 4000's, down from 6000's yesterday. Coag's elevated but improved today with some factor supplementation. IMPRESSION: FHF in PT due to rhabdo. PT lab profile improved today, indicative of possible recovery. Will initiate w/u for transplant, and if worsens overnight, will list as Status I in AM. PT will require q2hr neuro checks to assess for increasing ICP. If evidence of increased ICP, will need ICP monitor placed by NS svc. Also, markedly tense thighs bilat (L>R) very concerning for compartment syndrome. Would have ORTHO or VASC SURG svc's eval. May require acute FFP/Cryo use to allow compartment pressure measurement. Will follow closely with you.**

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