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1 PURPOSE

This report provides a list of publications that were important in the development of, or are directly relevant to the STAN® Fetal Heart Monitor.

The report is split into two parts – those publications that occurred before the original PMA submitted by Neoventa (December 2001) and those published after that date. Additionally, references are included to new articles that have not yet been published.

2 BIBLIOGRAPHY

2.1 Published Studies (at the time of the original PMA)

2.1.1 Physiological reactions to hypoxia

[1] Cohn HE, Sacks EJ, Heyman MA, Rudolph AM. Cardiovascular responses to hypoxaemia and acidemia in fetal lambs. Am J Obstet Gynecol 1974,120: 817–824.

[2] Dagbjartsson A, Herbertsson G, Stefansson TS, Kjeld M, lagercrantz h, Rosén KG. Beta-adrenocepter agonists and hypoxia in sheep fetuses. Acta Physiol Scand 1989,137:291-299.

[3] Dagbjartsson A, Kjellmer I, Rosén KG, Acute blockade of β1-receptors in the asphyxiated sheep fetus. Acta Physiol Scand 1987,130:381-385.

[4] Dawes GS, Mott JC, Shelley HJ. The importance of cardiac glycogen for the maintenance of life in fetal lambs and newborn animals during anoxia. J Physiol 1959,146: 516–538.

[5] Fisher DJ. Heymann MA. Rudolph AM; Myocardial oxygen and carbohydrate consumption in fetal lambs in utero and in adult sheep. Am J of Physiol 1980,238:399–405.

[6] Fisher D, Heyman M, Rudolph A. Fetal myocardial oxygen and carbohydrate consumption during acutely induced hypoxemia. Am. J. Physiol 1982,242:657-661.

[7] Goldaber K, Gilstrap L, Leveno K, Dax J, McIntyre DD. Pathologic fetal acidemia. Obstet Gynec 1991,78:1103–1107.

[8] Greene KR, Rosén KG. Intrapartum asphyxia. In: Levene MI, Bennett MJ, Punt J, editors. Fetal and neonatal neurology and neurosurgery. Edinburgh, London, Melbourne and New York: Churchill Livingstone, 1995: 265–272.

[9] Hökegård KH, Eriksson BO, Kjellmer I, Magno R, Rosén KG. Myocardial metabolism in relation to electrocardiographic changes and cardiac function during graded hypoxia in the fetal lamb. Acta Physiol Scand 1981,113: 1–7.

[10] Itskovitz J, LaGamma EF, Rudolph AM. Heart rate and blood pressure responses to umbilical cord compression in fetal lambs with special reference to the mechanism of variable deceleration. Am J Obstet Gynecol 1983 Oct 15,147(4):451–457.

[11] Kjellmer I, Prenatal and intrapartum asphyxia. In; Fetal and Neurology and Neurosurgery. Eds Levene M et al. Churchill Livingstone, 1988: 357–369.

[12] Lagercrantz H. Bistoletti P. Cathecholamine release in the newborn infant at birth. Pediatric Research 1977,11:889–893.

[13] Lagercrantz H, Slotkin T. The ”stress” of being born. Scientific American 1986,254:92-118.

[14] Low JA, Galbraith RS, Muir DW, Killen HL, Pater EA & Karchmar EJ. Factors associated with motor and cognitive deficits in children after intrapartum hypoxia. Am J Obst Gynec 1984,148(5):533–539.

[15] Mott J. The ability of young mammals to withstand total oxygen lack. Brit. Med. Bulletin 1961,17:144-147.

[16] Murphy KW, Johnson P, Moorcraft J, Pattinson R, Russell V & Turnbull Sir A . Birth asphyxia and the intrapartum cardiotocograph. Br J Obstet Gynaecol 1990,97: 470–479.

[17] Nylund L. Lagercrantz H. Lunell N.O. Cathecolamines in fetal blood during birth in man. J Dev Physiol 1979,1: 271–435.

[18] Peebles DM. Cerebral hemodynamics and oxygenation in the fetus: the role of intrapartum near-infrared spectroscopy. Clin Perinatol 1997,24: 547–565.

[19] Richardson B, Carmichael L, Homan J, Patrick J. Electrocortical activity, electro-ocular activity, and breathing movements in fetal sheep with prolonged and graded hypoxemia. Am J Obstet Gynecol 1992,167:553-558.

[20] Richardson BS, Carmichael L, Homan J, Johnston L, Gagnon R. Fetal cerebral, circulatory, and metabolic responses during heart rate decelerations with umbilical cord compression. Am J Obstet Gynecol 1996,175(4 Pt 1):929–936.

[21] Rosén KG. Alterations in the fetal electrocardiogram as a sign of fetal asphyxia. Pediatrics, 1976.

[22] Rosén KG, Dagbjartsson A, Henriksson BA, Lagercrantz H, Kjellmer I. The relationship between circulating catecholamines and ST waveform in the fetal lamb electrocardiogram during hypoxia. Am J Obstet Gynecol 1984,149:190–195.

[23] Rosén KG, Kjellmer I. Changes in the fetal heart rate and ECG during hypoxia. Acta Physiol Scand 1975,93:59-66.

[24] Rosén KG. Lilja H. Hökegård K-H. Kjellmer I; The relationship between cerebral cardio-vascular and metabolic functions during labour in the lamb fetus. In: Jones CT (ed) Symposium on the physiological development of the fetus and newborn. Academic Press, London. 1985. pp. 461-465.

[25] Shelley H. Glycogen reserves and their changes at birth and in anoxia. Brit. Med. Bulletin 1961,17:137-143.

[26] Siggaard-Andersen O. An acid-base chart for arterial blood with normal and pathophysiological reference areas. Scand. J. Clin. Lab. Invest. 1971,27:239-245.

[27] Su JY, Friedman WF; Comparison of the responses of fetal and adult cardiac muscle to hypoxia. Am J Physiol,1973,224(6):1249–1253.

[28] Thiringer K, Cord plasma hypoxanthine as a measure of foetal asphyxia. Hypoxanthine as a measure of Foetal Asphyxia: Sheep experiments and a clinical study in human neonates. Dep. Of Paediatrics I, Östra sjukhuset, Göteborg, Sweden, 1982, paper V: 1-14.

[29] Thiringer K. Karlsson K. Rosén K G. Kjellmer I. Contribution of heart muscle, liver, skeletal muscle and placenta to the asphyxial hypo-xanthine elevation in the acutely exteriorised fetal lamb. Biol Neonate 1984,54:169–182.

[30] Widmark C, Lindencrantz K, Murray H, Rosén KG. Changes in the PR, RR and ST waveform of the fetal lamb electrocardiogram with acute hypoxemia, J Dev Physiol 1992; 18; 99-103

2.1.2 The CTG

[31] Editorial. Intrapartum fetal monitoring – a disappointing story. N Eng J Med 1990,322:624–626.
[32] Gardosi J. Intrapartum surveillance: recommendations on current practice and overview on new developments. Intern J. Gynecol Obstet 1995,49:213-221.
[33] Green KR. Intelligent fetal heart rate computer systems in intrapartum surveillance. Current Opinion in Obstetrics and Gynecology 1996, 8: 123-127.
[34] Ingemarsson I, Ingmarsson E. Elektronisk fosterövervakning, Studentlitteratur 1987.
[35] Itskovitz J, LaGamma EF, Rudolph AM. Heart rate and blood pressure responses to umbilical cord compression in fetal lambs with special reference to the mechanism of variable deceleration. Am J Obstet Gynecol 1983,147(4):451–457.
[36] Larsen JF. Why has conventional intrapartum cardiotocography not given the expected results?. J Perinat Med 1996,24:15–23.
[37] MacDonald D, Grant A, Sheridan-Pereira M et al. The Dublin randomised controlled trial of intrapartum fetal heart rate monitoring. Am J Obstet Gynecol 1985,152:524–539.
[38] Neilson J. Cardiotocography during labour. BMJ 1993,306:347-348.
[39] Nelson KB, Dambrosia JM, Ting TY, Grether JK. Uncertain value of electronic fetal monitoring in predicting cerebral palsy. N Eng J Med 1996,334:613–618.
[40] Parer J, Krueger T, Harris J. Fetal oxygen consumption and mechanisms of heart rate response during artificially produced late decelerations of fetal heart rate in sheep. Am J Obstet Gynecol 1980,136:478-482.
[41] Richardson BS, Carmichael L, Homan J, Johnston L, Gagnon R. Fetal cerebral, circulatory, and metabolic responses during heart rate decelerations with umbilical cord compression. Am J Obstet Gynecol 1996,175(4 Pt 1):929–936.
[42] Rooth G, Huch A, Huch R. Guidelines for the use of fetal monitoring. Intern J Gynaecol Obstet 1987,25:159-167.
[43] Thacker SB. Effectiveness and safety of intrapartum fetal monitoring. In fetal monitoring, ed. Spencer JAS, Castle House Publications. 1989, 211-217.
[44] Umstad MP, Permezel M, Pepperell RJ. Litigation and the intrapartum cardiotocograph. Br J Obstet Gynaecol 1995,102:89–91.

2.1.3 The ST waveform of the fetal electrocardiogram

[45] Amer-Wåhlin I, Hellsten C, Norén H, Hagberg H, Herbst A, Kjellmer I, Lilja H, Lindoff C, Månsson M, Mårtensson L, Olofsson P, Sundström A-K, Marsál K. Cardiotocography only versus cardiotocography plus ST analysis of fetal electrocardiogram for intrapartum fetal monitoring: a Swedish randomised controlled trial. Lancet 2001; 358: 534–38.

[46] Arulkumaran S, Lilja H, Lindecrantz K et al. Fetal ECG waveform analysis should improve fetal surveillance in labour. J Perinat Med 1990,18(1):13–22.

[47] Greene KG, Dawes GS, Lilja H, Rosén KG. Changes in the ST waveform of the fetal lamb electrocardiogram with hypoxaemia. Am J Obstet Gynecol 1982,144:950–957.

[48] Greene KG, Westgate J. The ST waveform. In: Van Geijn HP, Copray FJA, editors. A critical appraisal of fetal surveillance. Amsterdam: Elsevier Science B.V., 1994:388–398.

[49] Greene KR, Rosén KG. Intrapartum asphyxia. In: Levene MI, Bennett MJ, Punt J, editors. Fetal and neonatal neurology and neurosurgery. Edinburgh, London, Melbourne and New York: Churchill Livingstone, 1995: 265–272.

[50] Greene KR, Rosén KG. Long term ST waveform changes in the ovine fetal electrocardiogram: the relationship to spontaneous labour and intrauterine death. Clin Phys Physiol Meas 1989,10:33–40.

[51] Hon EH & Lee ST. The fetal electrocardiogram of the dying fetus. Am J Obstet Gynecol 1963,87: 804.

[52] Hökegård KH, Eriksson BO, Kjellmer I, Magno R, Rosén KG. Myocardial metabolism in relation to electrocardiographic changes and cardiac function during graded hypoxia in the fetal lamb. Acta Physiol Scand 1981,113: 1–7.

[53] Hökegård KH, Karlsson K, Kjellmer I, Rosén KG. ECG-changes in the fetal lamb during asphyxia in relation to beta-adrenoceptor stimulation and blockade. Acta Physiol Scand 1979,105: 195-203.

[54] Johanson RB, Rice C, Shokr A et al. ST waveform analysis of the fetal electrocardiogram could reduce fetal blood sampling. Br J Obstet Gynaecol 1992,99: 167–172.

[55] Lilja H, Greene KR, Karlsson K, Rosén KG. ST waveform changes of the fetal electrocardiogram during labour - a clinical study. Brit. J. Obstet. Gynecol. 1985; 92: 611-617.

[56] Lilja H, Karlsson K, Lindecrantz K, Rosén KG. Microprocessor based waveform analysis of the fetal electrocardiogram during labor. Int. J. Gynecol. Obstet. 1989; 30: 109-116.

[57] Lindencrantz K. Processing of the fetal ECG, An Implementation of Dedicated real-time Microprocessor System. Thesis, Chalmers University of Technology, Technical Report No 135, 1983.

[58] Lindencrantz K, Lilja H, Widmark C & Rosén KG. The fetal ECG during labour. A suggested standard. J Biomed Eng 1988,10: 351–353.

[59] Luzietti R, Erkkola R, Hasbargen U, Mattsson L, Thoulon J, Rosén KG. European community multi-center trial ”fetal ECG analysis during labor”: ST plus CTG analysis. J. Perinat. Med. 1999,27:1-10.

[60] Mistry RT, Neilson JP. Intrapartum fetal ECG plus heart rate recording. The Cochrane Library Issue 2. Oxford 1998.

[61] Murphy KW, Russell U, Johnson P, Valente J. Clinical assessment of fetal electrocardiogram monitoring in labour. Br J Obstet Gynaecol 1992,99: 32–37.

[62] Noble D. The initiation of the heart beat. OXFORD University Press, Oxford, 1979.

[63] Outram N. Intelligent pattern analysis of the fetal electrocardiogram. Thesis, University of Plymouth, UK. 1997.

[64] Pardi G, Tucci E, Uderzo A & Zanini D. Fetal electrocardiogram changes in relation to fetal heart rate patterns during labour. Am J Obstet Gynecol 1974,118:243–250.

[65] Pipberger HV, Ahzbaecher RC, Berson AS, Briller SA, Brody DA, Flowers NC, Geselowitz DB, Lepeschkin E, Oliver GC, Schmitt OH, Spach M. Recommendations for Standardizations of Levels of Specifications for Instrument in Electrocardiography and Vectorcardiography. Report of the Committee on Electrocardiography, American Heart Association, 1975, 11-31.

[66] Rosén KG. Alterations in the fetal electrocardiogram as a sign of fetal asphyxia – experimental data with a clinical implementation. J. Perinat. Med. 1986,14:355-364.

[67] Rosén KG Hökegård KH, Kjellmer I. A study of the relationship between electrocardiogram and haemodynamics in the fetal lamb during asphyxia. Acta Physiol Scand 1976,98: 275–284.

[68] Rosén KG, Arulkumaran S, Greene KG et al. Clinical validity of fetal ECG analysis. In: Saling E, (ed). Perinatology. New York: Raven Press, 1992: 95–110.

[69] Rosén KG, Dagbjartsson A, Henriksson BA, Lagercrantz H, Kjellmer I. The relationship between circulating catecholamines and ST waveform in the fetal lamb electrocardiogram during hypoxia. Am J Obstet Gynecol 1984,149:190–195.

[70] Rosén KG, Greene K, Hökegård KH, Karlsson K, Lilja H, Lindecratnz K, Kjellmer I. ST wave form analysis of the fetal ECG – a potent method for fetal surveillance? A Presentation of experimental and clinical data. Cardiovascular and respiratory physiology in the fetus and neonate 1986,133:67-82.

[71] Rosén KG, Green KR. Fetal ECG research news. 1991 July, 2(3).

[72] Rosén KG, Hrbek A, Karlsson K et al. Changes in the ECG and somatosensory-evoked EEG responses during intrauterine asphyxia in the sheep. Biol Neonate 1976,30:95–101.

[73] Rosén KG, Isaksson O. Alterations in fetal heart rate and ECG correlated to glycogen, creatine phosphate and ATP levels during graded hypoxia. Biol Neonate 1976,30:17–24.

[74] Rosén KG, Kjellmer I. Changes in the fetal heart rate and ECG during hypoxia. Acta Physiol Scand 1975,93:59–66.

[75] Rosén KG, Lindecrantz K. STAN: the Gothenburg model for fetal surveillance during labour by ST analysis of the fetal electrocardiogram. Clin Phys Physiol Meas 1989,10: 51–56.

[76] Rosén KG, Luzietti R. The fetal electrocardiogram: ST waveform analysis during labour. J Perinat Med 1994,22:502–512.

[77] Sokolow M, McIlroy MB. In Clinical cardiology. Lange Medical Publications, Los Altos, California, 1981: 97-112.

[78] Watanabe T, Okamura K, Tanigawara S, Shintaku Y, Akagi K, Endo H, Yajima. Change in electrcardiogram T-wave amplitude during unbilical cord compression is predictive of fetal condition in sheep. Am J Obstet Gynecol 1992,166: 246-255.

[79] Westgate J. An evaluation of electronic fetal monitoring with clinical validation of ST wave form analysis during labour. Doctorial thesis, Department of Obstretrics, Plymouth Postgraduate Medical School, University of Plymouth, UK, 1993.

[80] Westgate J, Harris M, Curnow JSH, Greene KR. Plymouth randomized trial of cardiotocogram only versus ST waveform plus cardiotocogram for intrapartum monitoring: 2,400 cases. Am J Obstet Gynecol 1993,166(5):1151–1160.

[81] Westgate J, Keith RDF, Curnow JSH et al. Suitability of fetal scalp electrode for monitoring the fetal electrocardiogram during labour. Clin Phys Physiol Meas 1990,11:297–306.

[82] Widmark C. Fetal electrocardiogram. Relationships to oxygen lack, maturation and growth retardation. An experimental study. Dep. of Physiology, Univ. of Göteborg 1991:1-80.

[83] Widmark C, Hökegård KH, Lagercrantz H, Lilja H, Rosén KG. Electrocardiographic waveform changes and catecholamine responses during acute hypoxia in the immature and mature fetal lamb, Am J Obstet Gynecol 1989,160:1245-1250.

[84] Widmark C, Jansson T, Lindecrantz K, Rosén KG. ECG wave form, short term heart rate variability and plasma catecholamine concentrations in intrauterine growth-retarded guinea-pig fetuses. J Develop Physiol 1990,13:289-293.

[85] Widmark C, Jansson T, Lindecrantz K, Rosén KG. ECG waveform, short term heart rate variability and plasma cathecholamine concentrations in response to hypoxia in intrauterine growth retarded guinea pig fetuses. J Develop Physiol 1991,15:161–168.

2.1.4 Assessment of the condition of the baby

[86] Apgar V. A proposal for a new method of evalution of the newborn infant. Anthesia and Analgesia 1953,32:260–270.

[87] Duerbeck NB, Chaffin DG, Seeds JW. A practical approach to umbilical artery pH and blood gas determinations. Obstet Gynecol 1992,79(6):959–962.

[88] Frank PH, Vandenbussche A, Oepkes D, Keirse MJNC. The merit of routine blood pH measurement at birth. J Perinat Med 1999, 27: 158-165.

[89] Goldaber K, Gilstrap L, Leveno K, Dax J, McIntyre DD. Pathologic fetal acidemia. Obstet Gynec 1991,78:1103–1107.

[90] Greene KR, Rosén KG. Intrapartum asphyxia. In: Levene MI, Bennett MJ, Punt J, editors. Fetal and neonatal neurology and neurosurgery. Edinburgh, London, Melbourne and New York: Churchill Livingstone, 1995: 265–272.

[91] Grether J, Nelson K. Maternal Infection and cerebral palsy in infants of normal birth weight. Jama 1997,278:207-211.

[92] Huch A, Huch R, Rooth G. Guidelines for blood sampling and measurement of pH and blood gas values in obstetrics. Eur J Obstet Gynecol Reprod Biol 1994,54:165–175.

[93] Low J. Intrapartum fetal asphyxia: Definition, diagnosis, and classification. Am J Obstet Gynecol 1997,176:957-959.

[94] Low J. The role of blood gas and acid-base assessment in the diagnosis of intrapartum fetal asphyxia. Am J Obstet Gynecol 1988,159:1235-1240.

[95] Low J, Galbraith RS, Muir DW, Killen HI, Pater EA, Karchmar EJ. Motor and cognitive deficits after intrapartum asphyxia in the mature fetus. Am J Obst Gynec 1988,158:356–61.

[96] Low JA. The relationship of asphyxia in the mature fetus to long-term neurological function. Clin Obstet Gynecol 1993; 36: 82-90.

[97] Low JA. Mair D.W. Pater EA. Karchmar EJ. The association of intrapartum asphyxia in the mature fetus with newborn behaviour. Am J Obst Gynec 1991,163:1131–1135.

[98] MacLennan A. A template for defining a causal relation between acute intrapartum events and cerebral palsy: international consensus statement. BMJ 1999,319:1054-1059.

[99] Owen P, Farell TA, Steyn W. Umbilical cord blood analysis; a comparison of two simple methods of sample storage. Early Hum Dev 1995,42(1):67–71.

[100] Pello L, Bernard N, Caldeyro-Barcia R, Dawes G, Dunn PM, Geijn H, Huch A, Huch R, Ingemarsson I. Guidelines for the use of fetal monitoring. Int J Gynecol Obstet 1987 (25): 159-167.

[101] Richards DS, Johnson JWC. The practical implications of cord acid-base studies. Clin Obst Gynec 1993,36:91–98.

[102] Rosén KG, Murphy K: How to assess fetal metabolic acidosis from cord samples. J Perinat Med 1991,19:221–226.

[103] Rosen M, Dickinson J. The incidence of cerebral palsy. Am J Obstet Gynecol 1992,167:417-423.

[104] Ruth V.J Raivio K.O. Perinatal brain damage: predictive value of metabolic acidosis and Apgar score. Br Med J 1988,297:24–27.

[105] Sahling E. Langner K. Fetal acid-base measurements in labour. In Fetal monitoring (Spencer JAD ed.). Castle House Publications, Tunbridge Wells, UK. 1989,211–217.

[106] Vandenbussche F, Oepkes D, Keirse M. The merit of routine cord blood pH measurement at birth. J. Perinat. Med. 1999,27;158-165.

[107] Westgate J, Garibaldi JM, Greene KR. Umbilical cord blood gas analysis at delivery; a time for quality data. Br J Obstet Gynaecol 1984,101(12):1054–1063.

[108] Westgate J, Gunn A, Gunn T. Antecedents of neonatal encephalopathy with fetal acidaemia at term. Br J Obstet Gynaecol 1999,106:774-782.

[109] Westgate J, Rosén KG. Acid-base balance at birth. In: Van Geijn HP, Copray FJA, editors. A critical appraisal of fetal surveillance. Amsterdam: Elsevier Science B.V., 1994: 595–603.

[110] Westgate J, Green KR. How well is fetal blood sampling used in clinical practice? Br J Obstet Gynecol 1994; 101: 250-251.

[111] Whebble AM, Gillmer MDG, Spencer JAS, Sykes GS. Changes in fetal monitoring practice in the UK: 1997-1984. Br J Obstet Gynecol 1989; 86: 1140-1147.

2.2 Published Studies (new since the original PMA)

[112] Amer-Wåhlin I. Fetal ECG waveform analysis for intrapartum monitoring. Thesis. Department of Obstetrics and Gynecology, Lund University 2003.

[113] Amer-Wåhlin I, Bordahl P, Eikeland T, Hellsten C, Norén H, Sornes T, Rosén KG. ST analysis of the fetal electrocardiogram during labor: Nordic observational multicenter study. J Matern Fetal Neonatal Med. 2002 Oct;12(4):260-6.

[114] Dervaitis K, Poole M, Schmidt G, Penava D, Natale R, Gagnon R. ST segment analysis of the fetal electrocardiogram plus electronic fetal heart rate monitoring in labor and its relationship to umbilical cord arterial blood gases. American Journal of Obstetrics and Gynecology (2004) 191, 879-84.

[115] Devoe L, McDaniel T. FHR trace analysis - Visual vs. computerized analysis of FHR tracings. Contemporary Ob/Gyn 2002;5:64-80.

[116] Hagberg H, Amer-Wåhlin I, Herbst A, Lilja H, Norén H, Olofsson P, Marsal K Foster-EKG kombinerat med kardiotokografi förbättrar fosterövervakningen under förlossningen. Läkartidningen.2004; 101: 3875-81.

[117] Jaquemin Y. Letters to the editor - Fetal electrocardiography in labor and neonatal outcome. Am J Obstet Gynecol. Volume 189, Number 1, July 2003, 308-309.

[118] Kwee A, van der Hoorn-van den Beld CW, Veerman J, Dekkers AH, Visser GH. STAN S21 fetal heart monitor for fetal surveillance during labor: an observational study in 637 patients. J Matern Fetal Neonatal Med. 2004 Jun;15(6):400-7.

[119] Luttkus AK., Norén H, Stupin J, Blad S, Arulkumaran S, Erkkola R, Hagberg H, Lenstrup C, Visser G, Tamizian O, Yli B, Rosén KG, Dudenhausen J. Fetal scalp pH and ST analysis of the fetal ECG as an adjunct to CTG A multi-centre, observational study J Perinat Med. 2004;32(6):486-94.

[120] Neilson JP. Fetal electrocardiogram (ECG) for fetal monitoring during labour (Cochrane Review). In: The Cochrane Library, Issue 2, 2003. Oxford: Update Software.

[121] Norén H, Amer-Wåhlin I, Hagberg H, Herbst A, Kjellmer I, Marsal K, Olofsson P, Rosén KG. Fetal electrocardiography in labor and neonatal outcome: data from the Swedish randomized controlled trial on intrapartum fetal monitoring. Am J Obstet Gynecol. 2003 Jan;188(1):183-92.

[122] Olofsson P. Current status of intrapartum fetal monitoring: cardiotocography versus cardiotocography + ST analysis of the fetal ECG. European Journal of Obstetrics & Gynecology and Reproductive Biology 110 (2003) S113–S118.

[123] Oudijk MA, Kwee A, Visser GH, Blad S, Meijboom EJ, Rosén KG. The effects of intrapartum hypoxia on the fetal QT interval. BJOG. 2004 Jul;111(7):656-60.

[124] Rosén KG. Fetal electrocardiogram waveform analysis in labour. Curr Opin Obstet Gynecol. 2001 Apr;13(2):137-40. Review.

[125] Rosén KG, Amer- Wåhlin I, Luzietti R, Norén H. Fetal ECG waveform analysis. Best Pract Res Clin Obstet Gynaecol. 2004 Jun;18(3):485-514. Review.

[126] Rosén KG, Norén H. Fetal ECG Waveform Analysis – Current Developments. In Proceedings to the XIXth European Congress of Perinatal Medicine, Athens, October 2004. Editor: Antsaklis A, 2004.

[127] Ross MG, Devoe LD, Rosén KG. ST-segment analysis of the fetal electrocardiogram improves fetal heart rate tracing interpretation and clinical decision making. J Matern Fetal Neonatal Med. 2004 Mar;15(3):181-5.

[128] Siiraa S, Ojala T, Vahlberg T, Jalonen J, Välimäki I, Rosén KG, Ekholm E. Marked fetal acidosis and specific changes in power spectrum analysis of fetal heart rate variability recorded during the last hour of labour. Br J Obst Gynec 2004.

2.3 New articles (as yet unpublished)

[129] Amer-Wåhlin I, Ingemarsson I, Marsal K, Herbst A. Fetal heart rate patterns and ECG ST-segment changes preceding metabolic acidaemia at birth. BJOG. 2005 Feb;112(2):160-5.

[130] Amer-Wåhlin I, Källen K, Herbst A, Rydhström H, Sundström A-K, Marsal K. Implementation of new medical techniques. Experience from the Swedish randomized trial on fetal ECG during labour. J Mat Fetal and Neonatal Med.

[131] Norén H, Blad S, Carlsson A, Flisberg A, Gustavsson A, Rosén KG, Wennergren M, Hagberg H. STAN in clinical practice – the outcome of 2 years of regular use in the city of Göteborg.

[132] Norén H, Luttkus AK, Stupin JH, Blad S, Arulkumaran S, Erkkola R, Hagberg H, Luzietti R, Visser GHA, Yli B, Rosén KG. Fetal scalp pH and ST analysis of the fetal ECG as an adjunct to CTG to predict fetal acidosis in labour - A multi-centre, case controlled study.

[133] Rosén KG. Fetal electrocardiogram waveform analysis in labour. Curr Opin Obstet Gynecol 2005.

[134] Welin A-K, Blad S, Hagberg H, Rosén KG, Kjellemr I, Mallard C. Electrocardiographic changes following umbilical cord occlusion in the midgestation fetal sheep. Acta Obstetrics Gynaecol.