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SUMMARY

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MINUTES

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OPEN SESSION

Gastroenterology and Urology Devices
Advisory Panel

June 19, 2000

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**SUMMARY MINUTES OF THE
GASTROENTEROLOGY AND UROLOGY PANEL OF THE
MEDICAL DEVICES ADVISORY COMMITTEE**

OPEN SESSION

19 JUNE 2000

**Gaithersburg Hilton, Salons D and E
620 Perry Parkway
Gaithersburg, Maryland**

Gastroenterology and Urology Devices

Advisory Panel

20 June 2000

Panel Participants

Anthony N. Kalloo, M.D.
Panel Chair

Jenelle E. Foote, M.D.
Voting Member

Joseph H. Steinbach, PhD
Voting Member

Edward J. Baranski, M.D.
Temporary Voting Member

Patricia Smith Choban, M.D.
Temporary Voting Member

LTCDR Fathia Gabriel, M.D.
Temporary Voting Member

Jules Hirsch, M.D.
Temporary Voting Member

Richard A. Kozarek, M.D.
Temporary Voting Member

John H. Linner, M.D.
Temporary Voting Member

Douglas B. Nelson, M. D.
Temporary Voting Member

Mark P Sawicki, M.D.
Temporary Voting Member

Mark Talamini, M.D.
Temporary Voting Member

Diane K. Newman, RNC, MSN CRNP, FAAN
Panel Consumer Representative

FDA Participants

Mary J Cornelius
Executive Secretary, Gastroenterology and Urology Devices Panel

Daniel Schultz, M.D.
Captain , USPHS & Director, Division of Reproductive, Abdominal, and Radiological
Devices

Jeffrey W. Cooper, D.V.M.
Veterinary Medical Officer & Reviewer for Gastrointestinal Devices

Kathleen M. Olvey
Lead Reviewer

Gene A. Pennello, PhD
Statistician, Office of Surveillance and Biometrics

OPEN SESSION

Panel Chair Anthony N. Kalloo, M.D., called the session to order at 10:12 a.m. and noted the voting members present constituted a quorum. At his request the panel members introduced themselves and stated their qualifications. Dr. Jeffrey Cooper said that he would be replacing Ms. Cornelius as the Panel Executive Secretary.

Panel Executive Secretary Mary Cornelius read appointments to voting status for Drs. Baranski, Choban, Gabril, Hirsch, Kozarek, Linner, Nelson, Sawicki, and Talamini. After reading the conflict of interest statement, Ms. Cornelius noted that matters concerning Dr. Foote and Ms Newman had been considered and their full participation would be allowed and that waivers have been granted to Drs. Hirsch, Kozarek, Linner, and Choban.

OPEN PUBLIC HEARING

Seven individuals asked to address the panel.

Patricia McGraw, patient, gave a testimonial on how the Lap-Band surgery has improved the quality of her life and how she has had no side effects or problems in her 15 months since surgery.

Dr. Louis Martin, Louisiana State University, discussed his surgical experience with explanation of the Lap-Band and conversions from Lap-Bands to other types of obesity surgeries. Most of these surgeries were performed by laparoscopic means. He stated that the Lap-Band fills a gap in obesity treatments. Furthermore, the people wanting Lap-Band surgery were a different group of patients than the bypass group and had a different range of problems with different psychological profiles.

Walter Lindstrom, Obesity Law and Advocacy Center, urged the panel to approve the Lap-Band so that his clients would have this surgical option. Speaking as an advocate and a previously obese person, he wants people who suffer from this chronic disease to have a less invasive way to treat their illness.

Lynn McAfee, Council on Size and Weight Discrimination, described how medicine and sociology view obesity today. She raised several questions. Is it better to have never lost weight than to lose and then regain weight? Does the Lap-Band deliver sustained weight loss? Will this device prove to be effective and safe?

Brandy White, patient, gave a testimonial concerning the success of her weight loss and how her success influenced others around her to have Lap-Band surgery. Her talk was preceded by a video-tape about her weight loss.

Morgan Downey, American Obesity Association, discussed the definition and prevalence of obesity in the US and delineated some comorbid conditions. If the device is approved by the FDA, he urged that three criterion be met: appropriate training in the surgical technique and in understanding the pre- and post-operative psychological and social needs; adequate patient follow-up; and precise criteria for patient selection.

Dr. Harvey J. Sugarman, Virginia Commonwealth University, who was the principal investigator of this device at his institution, presented the data on 37 patients who had Lap-Band surgery. Fourteen of the 37 bands have been removed for complications and/or inadequate weight loss and five more bands will be removed in the future for inadequate weight loss. He urged the panel to vote for continuation of the study through the third year before approval.

Panel Executive Secretary Mary Cornelius read a letter from Cynthia Jones of Dallas Texas for the record. Due to her successful weight loss since her Lap-Band surgery last year, she recommended that the panel approve the device.

OPEN COMMITTEE DISCUSSION

PREMARKET APPROVAL APPLICATION P00008 BIOENTERIC

CORPORATION LAP-BAND ADJUSTABLE BANDING SYSTEM

Sponsor Presentation

Ms. Ellen Duke, President and CEO of BioEnterics Corporation, provided a brief history of Lap-Band surgery, described obesity in the US and compared other obesity surgeries.

Dr. David Munjal, Director of Clinical Research and Regulatory Affairs of BioEnteric Corporation, described the US clinical study protocol with baseline characteristics. The study was carried out from 1995 to 1998 with 299 patients serving as their own controls.

Dr. Kenneth G. MacDonald, Jr., East Carolina University and Investigator for BioEnterics, summarized the data from the 299 US patients. After discussing the weight loss and improvements in comorbidities after Lap-Band surgery, he reviewed the adverse events. Band slippage with gastric pouch dilatation was the most common adverse event, however, no mortality occurred. Drs. Kalloo, Sawicki and Nelson questioned Dr. MacDonald about the range of body mass index (BMI) in the US population, the number of patients requiring re-operation and the patients lost to follow-up.

Dr. Paul O'Brien, Monash University, Melbourne, Australia and Investigator for BioEnterics, discussed the data from the 441 international patients. These surgeons entered the study protocol after completing 50 Lap-Band surgeries. The patients were not as obese as their US counterparts with body mass indexes of 35 to 40. Adverse events were gathered retrospectively from chart reviews. The percentage of adverse events was lower in the international study than in the US study, and no mortality was observed. On average 50% weight loss was seen in the first two post-operative years followed by stability in weight.

Dr. Kenneth G. MacDonald, Jr. reviewed the risk benefit analysis of the Lap-Band surgery. Drs. Linner, Baranski, Talamini, Gabriel, Choban, Sawicki, Foote and Ms. Newman asked Dr MacDonald questions concerning the surgery, slippage of the band, personality profiles of the patients, selection criteria of the patients, diabetic patients, patients on steroids, posterior stomach wall sutures, and barium studies during the trial. Dr. Foote noted that the US surgeons did not get past the learning curve for this surgery.

Ellen Duke reviewed surgeon and support personnel qualifications and training. In addition, she outlined post-market plans and labeling.

The Open Committee Discussion was adjourned at 12:58 p.m. and reconvened at 1:32 p.m.

FDA Presentation

Ms. Kathleen M. Olvey presented an overview of the pre-clinical studies. She listed the indications for use of the Lap-Band system. A device description followed with a delineation of preclinical testing. Biocompatibility testing of the silicone elastomer,

titanium and stainless steel components was completed. She reviewed device performance, device malfunction, sterility and labeling.

Dr. Dan Schutz stated that this study was designed as a 36-month prospective study. He listed the inclusion and exclusion criteria. He then demonstrated the endpoints that measured the successes in weight loss and changes in quality of life and, conversely, the adverse events. The 299 patients had surgery and follow-up at eight US sites where the device was implanted by laparoscopy or laparotomy. He discussed the clinical signs and symptoms of the adverse events and the types of repeat surgical interventions.

In summary the patients lost about one third of excess body weight in a year and sustained that weight loss over the next one to two years. Ninety percent experienced at least one adverse event, many of which were transient. About one third of the patients required additional surgical intervention, and about half of those interventions were explantations and half were revisions.

Dr. Gene A. Pennello reviewed the three separate studies: the US prospective study; the retrospective international study and the literature review. The end points in the US study were excess weight loss and, second, quality of life. In this study the percentage of excess body weight lost increases with a decrease in baseline weight. The variation in excess body weight loss between the various institutions suggests that the sites differ in physician training and patient management.

The international study was a retrospective analysis of the 441 patients in six countries. These international subjects lost 50% of their excess body weight but initially weighed less than the patients in the US study. Although the adverse events were 38% in the international study compared to 88% in the US study, the severe adverse events were

comparable. Both studies were followed for two and a quarter years. Possible explanations for the discrepancies in the studies are the international surgeons were more experienced and the international charts tended not to report mild adverse events.

Of the 1070 articles abstracted, few used excess weight loss and adverse events as end points. These studies were mostly uncontrolled case series that also did not address loss of patients to follow up. In general, the adverse events for the patients with Lap-Bands were much fewer than for patients with other bariatric surgery, however, the follow-up for Lap-Bands was only five years. The meta-analyses had problems with publication bias, different end point analyses and varying lengths of follow-up.

Kathleen Olvey outlined the proposed post-approval study that would include four separate studies. The first US study is to follow the 299 patients to the end of three years. An additional arm of 240 patients will be followed for one year at additional sites in the US. Two international studies will be undertaken: one prospective and one retrospective for five years each. All four studies will have the same end-points of adverse events and percent excess weight loss. She urged the panel to carefully consider the appropriate length of time for pre- and post-approval studies.

Panel Clinical Review

Dr. Mark A Talamini commented from a general surgeon's perspective for the panel overview that laparoscopic surgery is the wave of the future and has become popular over the past ten years. After questioning whether laparoscopic surgery should be as good as the original open operation, he stated that the two surgeries should be comparable. One of the major problems of this type of surgery is the motion of the gastro-esophageal junction with every swallow.

General skepticism is felt in the surgical community about some laparoscopic procedures. Recently subspecialty drift has occurred with laparoscopic surgeons performing cholecystectomies and anti-reflux surgery.

FDA approval is important not only to surgeons, but also to patients, industry, marketers and the public. Labeling and training are also important considerations associated with FDA approval.

Panel Discussion Points

During the panel discussion Dr. MacDonald and Dr. O'Brien answered several questions posed to them by the panel.

The panel felt that the weight loss demonstrated with this surgery is significant and is associated with reduction in comorbidities, but is less effective than other obesity surgeries. They had reservations about the two-year data and would prefer the completed three-year study.

After some discussion the panel agreed that the restrictions for this surgery would include: infection, portal hypertension, hiatal hernia and reflux. Super-obese patients were better served with a gastric bypass procedure.

According to the panel the adverse events to the patients under-going this procedure were not excessive. The persistent issues are the number and position of sutures, concern over long term erosion of the band and the effect on subsequent surgeries.

One of the main questions concerning the panel about this surgery is whether a two-year study is sufficient to evaluate adverse effects. The consensus opinion was that a three-year follow-up to the study was necessary.

The site to site variations remain a perplexing problem. At this time no definite data is compiled on patient selection, management and experience of the various surgeons.

In the future a comparison with the retrospective international study and the literature review can help to define the safety and effectiveness of this device.

Labeling

The panel agreed that the consumer labeling needs to be clearer and more user friendly, specifically it should be adjusted to include some of the data reviewed at this meeting. With regard to complications of this surgery, the warning should be clearer for the consumer in regard to post-operative complications and the rules the patients should follow.

Post Approval Study

The three-year study should be extended two more years to a total of five years in the post approval period. An additional five-year post market study, which could be stratified, should be undertaken that emphasizes comorbidities and functional studies. The end point of the study would be erosion of the band.

Physician Training

The panel agreed that credentialing of surgeons for this procedure is very difficult to control. Pertinent questions concern proctoring and the minimal number of cases to obtain and maintain credentialing. A good effort has been made to set in place a training program. Other surgeries could help qualify a surgeon for credentialing, such as, some other laparoscopic and bariatric surgeries.

OPEN PUBLIC HEARING

Ellen Duke stated that the data indicate patients who used this device had stable weights and that with time the adverse effects decreased. She compared the data from the international study and added that the Lap-Band is not a new device.

Lynn McAfee predicted that a healthy population would be using this device and that there would be many of these operations. One of her greatest fears was recurrence of excess weight after this surgery.

PANEL VOTE

Panel Executive Secretary Mary Cornelius read the voting rules and options to the panel.

A motion was made and seconded to recommend to not approve of the PMA at this time. The basis for the not approvable vote was that a two-year study was not sufficient and that the three-year study should be completed as originally designed. This motion passed with a six to four vote. The panel members then stated the logic behind their votes.

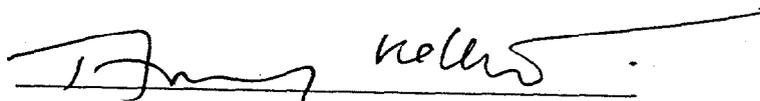
After thanking the panel, FDA and the sponsor, **Dr. Kalloo** adjourned the meeting at 4:54p.m.

I certify that I attended the Open Session of the Gastroenterology and Urology
Devices Advisory Panel Meeting on June 19, 2000, and that this summary
accurately reflects what transpired.



Mary J. Cornelius
Panel Executive Secretary

I approve the minutes of this meeting as recorded in this summary.



Anthony N. Kalloo, M.D.
Panel Chair

Summary Minutes prepared by

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