

An experience with the Viking Systems 3Di camera and the Endocontrol ViKY robotic scope holder during laparoscopic Roux-en-y Gastric Bypass Surgery

Introduction

The combined technologies of 3D visualization and a robotic scope holder, bring enhanced visual content and visual precision to the practitioner during laparoscopic surgery. The most popular robotic scope holder, the AESOP from Computer Motion, Inc., has effectively been off the market since the acquisition of Computer Motion, Inc, by Intuitive Surgical, Inc. in 2002. The introduction of the ViKY system from EndoControl, in combination with Viking Systems 3Di, now allows hospitals once again to deliver enhanced visual content and visual precision to their OR's. It is important to note that these technologies can be delivered for a fraction of the investment required for the Intuitive Surgical, Inc. DaVinci device.

Objectives

- To assess the ViKY system during laparoscopic surgery, as to its functionality, ease of use and setup, as described/reported by Dr. Freeman, a Viking 3D and AESOP user.
- To elicit other responses/comments/observations from Dr. Freeman and staff members.

Background

Laparoscopic Roux-en-y Gastric Bypass has become the industry gold standard for surgical treatment of the patient who has developed chronic morbid obesity. The primary advantages for this surgical approach are a reduced number of in-hospital days, along with a faster return to work and/or normal activities. It is performed approximately 125,000 times per year in the US marketplace.

ViKY (Vision Control in endoscopy) from EndoControl, is the most compact laparoscopic robot available on the market. To date several hundred procedures have been performed with the ViKY system in Europe in gynecology, general surgery, urology and thoracic surgery.

The Viking 3Di Vision System is a state-of-the-art 3D vision platform providing natural depth perception. The Viking 3Di Vision System provides surgeons the ability to perform pure laparoscopic procedures with confidence and ease.

Dr. B. Freeman is a board certified General surgeon who has been in the practice of general surgery for > 25 years. In 2002 he decided to focus his surgical practice exclusively on laparoscopic bariatric surgery. At that time, he equipped his operating room with the Vista 3D vision system as well as the Computer Motion AESOP robotic scope holder device. He has since replaced the Vista 3D system with most current iteration of the Viking 3Di camera system. With these 2 devices in his practice, Dr. Freeman has performed > 2750 laparoscopic Roux-en-y Gastric Bypasses. As a result of his favorable patient outcomes, his practice has attained the title of "Center of Excellence" from the esteemed American Society of Bariatric Surgeons.

Field Report

Dr. Freeman replaced the AESOP device and employed the ViKY system in conjunction with the Viking 3Di system for a laparoscopic roux-en-y gastric bypass on Tuesday 8/11/09.

- **Functionality / Ease of use / Ease of setup**

An in-service was conducted for Dr. Freeman and his staff on the ViKY system. This in-service lasted 10 minutes. The ViKY system was then autoclaved for the procedure. Dr. Freeman and his staff installed and setup the ViKY system, for the 1st time, in < 4 minutes. Dr. Freeman immediately began manipulating the laparoscope, via the ViKY foot pedal, without difficulty. He preferred the foot pedal activation vs. the voice activation with the AESOP. He appreciated the smooth, precise movements of the ViKY system. He found the ViKY system to provide even more precise mechanical control of the laparoscope as compared with the AESOP movement. Dr. Freeman commented that the ViKY device felt well engineered and durable.

- **Other responses/comments/observations elicited**

Dr. Freeman has performed 2750 surgeries with both the Viking 3Di visualization system and the AESOP robotic scope holder. He is uniquely qualified to compare the value of the two combined technologies. And in so comparing, he found the Viking Systems 3Di and the ViKY system to deliver even superior harmony of the two technologies. Eliminating the frequent voice activation and providing more precise laparoscope movement, made for a passive, accurate laparoscope positioning, that enriched the 3D visual surgical field. The surgical staff thought the sterility requirements, the straightforward use and setup instructions were minimal and as such an asset to the ViKY system. Both Dr. Freeman and staff stated that the ViKY system was a viable alternative and a superior replacement for AESOP. They would buy and use the device, in conjunction with their Viking 3Di visualization system.

Conclusion

3D visualization technology in conjunction with a scope holding robotic device, creates tangible values for the laparoscopist. Dr. Freeman's experience has validated that the customer now has a powerful and affordable technology set available to them to utilize in their quest for improved patient outcomes and OR efficiencies.