Surgeon Performs First Beating Heart Fully Endoscopic Bypass Surgery

WAYNE, N.J., Sept. 24 /PRNewswire/ -- MAQUET Cardiovascular announces that Johannes Bonatti, M.D., Professor of Surgery and Director of Coronary Surgery and Advanced Coronary Interventions at the University of Maryland Heart Center in Baltimore, has completed the first use of the MAQUET Minimized ExtraCorporeal Circulation (MECC) system in the United States during a successful robotic and fully endoscopic heart surgery. The new cardiopulmonary bypass technology is the first major advancement in perfusion technology in the last decade. It is designed to minimize the effects of traditional heart surgery and aid in minimally-invasive heart surgery without the need to stop the patient's heart from beating.

"The difficulty in performing robotic beating heart bypass surgery safely and comfortably on a patient has been a barrier to the growth of minimally invasive procedures, despite their benefits to patients over more open approaches," said Dr. Bonatti. "A miniaturized cardiopulmonary bypass system, such as MAQUET's MECC technology, provides alternatives to surgeons performing robotic surgery and allows patients who were previously not a candidate to receive minimally invasive interventions."

Dr. Bonatti has been recognized as one of the world's thought-leaders in the growing field of totally endoscopic coronary surgery. Through his use of robotic surgical equipment, Dr. Bonatti offers his patients an alternative to open surgery that has been demonstrated to reduce overall recovery time and enable patients to return to their daily activities significantly faster than with traditional bypass surgery.

Traditional bypass surgery uses a standard heart lung bypass machine with catheters inserted directly into the patient's heart. The heart is stopped, allowing the surgeon a static area in which to sew and connect bypass grafts.

However, it has been demonstrated that outcomes can potentially be improved if the heart is not stopped (Puskas et al, Ann Thorac Surg, 2007;84:1447-56). The revolutionary MECC system, in contrast, typically requires the placement of two catheters in the patient's upper thigh and does not require the surgeon to stop the patient's heart during surgery. The combined effect of allowing the heart to remain beating, the reduction of tubing needed, and the reduced amount of fluid required to dilute the blood versus that needed in traditional bypass, offers improved safety and the ability to offer a minimally invasive approach to the patient. Diluting the patient's blood during routine bypass surgery has been associated with an increased need for blood transfusions. MECC technology requires only a small amount of fluid to be given to the patient and, therefore, decreases the likelihood of a necessary blood transfusion.

"The MECC system's ability to improve patient safety and outcomes is the gold standard quality we look to incorporate into our cardiopulmonary perfusion products," said Raoul Quintero, President and CEO, MAQUET Cardiovascular US Sales LLC. "Physicians have been asking for new technology that offers alternatives for both conventional and high-risk patients. Our MECC technology provides a revolutionary new platform for physicians who want to perform minimally-invasive beating heart surgery and is an alternative to traditional perfusion technology."

The MECC system has incorporated many built-in features over existing technologies that may benefit patients:

- MECC systems have heparin coating called BIOLINE, providing excellent biocompatibility and improving overall safety.
- Decreases the likelihood of blood transfusions.
- Minimized systemic inflammatory response through MECC's reduced foreign surface and the elimination of blood to air contact.
- Prime volume is significantly lowered from the small size of MECC's tubes and components resulting in a decrease of blood dilution.

"Utilizing MECC in lieu of a conventional bypass system provides a unique mechanism of patient surgical management that we have not had access to before," said Brian McCormick, C.P.P., Chief Perfusionist, Coalition of Perfusion Services at the University of Maryland Medical Center in Baltimore.

"We can essentially manage our patients as if they were on a traditional bypass circuit but negate the routine complications such as blood loss, systemic inflammatory response and blood dilution that we have to constantly manage during the surgery."

Fore information, visit www.maquet.com [1] and www.getinge.com [2]

Source URL (retrieved on *12/19/2013 - 8:13am*):
http://www.surgicalproductsmag.com/news/2009/09/surgeon-performs-first-beating-heart-fully-endoscopic-bypass-surgery?qt-most_popular=0

Links:
[1] http://www.maquet.com/
[2] http://www.getinge.com/