

ROBOTIC SURGERY AT CLEMENCEAU MEDICAL CENTER

Clemenceau medical Center is the first and only facility in Lebanon that provides Robotic assisted Laparoscopic surgery. Experts in different specialties that apply Robotic surgeries comprise the Robotic team at CMC and offer surgical care and expertise not found anywhere else in Lebanon or the region.

-A tower that has the main computer and ancillary equipments needed like an energy source, the computer mainframe, cable connections etc...

HISTORY OF ROBOTIC SURGERY:

The daVinci Robot is manufactured in the United States. It has been exponentially adopted in medical centers both in the United States and Europe.

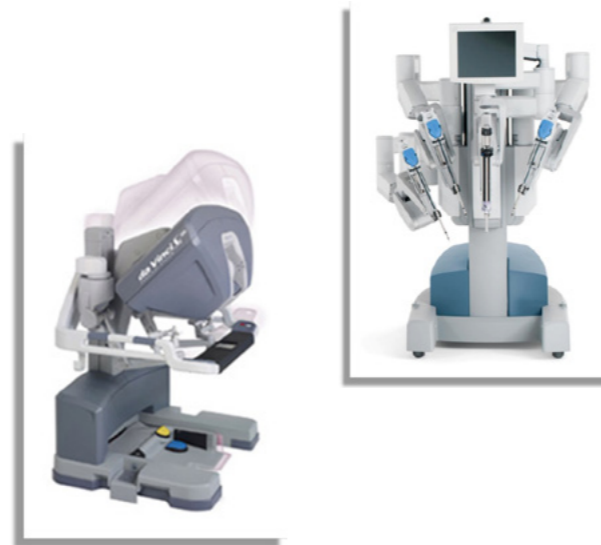
It is used in multiple disciplines ranging from Urology, to general surgery, gynecologic, cardiothoracic and pediatric surgery.

Robotic surgery has now changed patient care and established itself as one of the most important and promising breakthroughs in medical innovation.

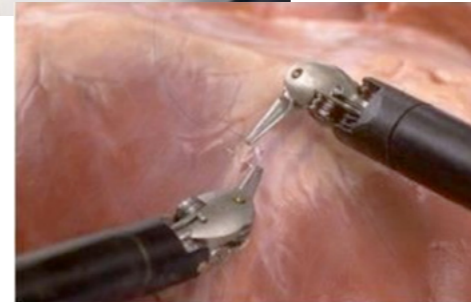
WHAT IS THE DAVINCI ROBOT?

The daVinci Robot is a system that is attached to the laparoscopic trocars giving the possibility to the surgeon to perform a laparoscopic surgery with multiple advantages. It is comprised of 3 main elements

- the patient bed side cart which contains the 3 or 4 arms that will be attached to the patient, a camera and 2 or 3 micro instruments according to the surgery performed.
- the surgeon console where the surgeon sits and operates the robotic arms, he has a 3 dimensions High Definition view of his surgical field allowing him to perform precise and complex movements.



The 3 components of the robotic system: Surgeon console, patient cart and tower.



Translations of the surgeon's movements into robotic arms movements

WHAT ARE THE ADVANTAGES OF ROBOTIC SURGERY?

Robotic surgery is an advanced form of laparoscopic surgery.

The advantages can be divided into advantages over the traditional "open" surgery: translating into less pain, better cosmesis (small 8mm incisions instead of one large 8-10 cm incision) less blood loss and risk of blood transfusions and short hospital stays (less than 24 hrs compared to the 3 or 4 days of open surgery)

Advantages over laparoscopic surgery include: better ergonomics, more precise movements, endo-wrist movements and tremor reduction, improved 3D HD endoscopic view; all allowing the surgeon to perform the most complex surgeries without compromising on the minimally invasive approach.

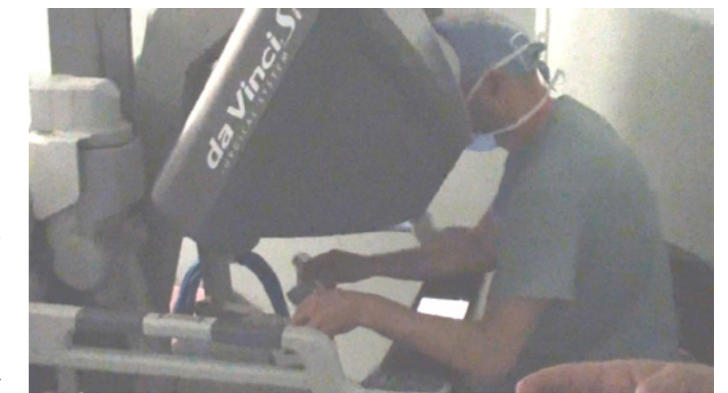
ROBOTICS IN GENERAL SURGERY:

The first Robot assisted procedure in General Surgery was performed at CMC Tuesday 31st of July 2012. This constitutes a major breakthrough in surgical practice in both Lebanon and the region. A team of international experts recruited as full-timers at CMC, led by Professor

Claude Tayar, performed a series of surgeries on several patients with different diseases. Pr Tayar started the Robotic Surgery program in his field 10 years ago in the University Hospitals of Paris and became a European expert and proctor for this new technology.

Major advantages of this technology include a real 3D HD vision of the abdominal cavity with articulated instruments and sophisticated software enabling very precise movements in performing laparoscopic surgery. The Robot allows more surgeons to perform procedures with a minimally invasive approach and permits experienced laparoscopic surgeons to do procedures that are done otherwise by a classical open fashion. This technology reduces by these means blood loss, pain and complications of surgery.

Applications of Robotic Surgery include: Gastric surgery (cancer, reflux, Gastric Bypass, Band, Sleeve gastrectomy), Liver and bile duct, Pancreatic Resections, Intestines (small bowel, colon, and rectum) and Hernia.



ROBOTIC ASSISTANCE IN GYNECOLOGIC SURGERY

When a women needs to undergo surgery multiple parameters have to be taken in consideration. Such parameters include the optimal treatment, surgical outcomes, recovery process and cosmetic result.

With robotic surgery, the most complex gynecologic surgeries can be performed with very small (8 mm) incisions, allowing the surgeon to perform a more precise procedure and providing the patient with improved surgical outcomes in the form of short hospital stay, less bleeding, less pain, better healing and also leaving very little to no surgical scars.

Removal of the uterus (hysterectomy); removal of uterine fibroids (myomectomy); surgeries for endometriosis or the ovaries, certain types of gynecologic cancers and surgeries for pelvic organ prolapse can now all be performed using this newest technology.

This surgical innovation has changed how surgeons look at the treatment of disease. An expert Robotic gynecologic surgeon recently moved back from the United States where he not only practiced but also trained other surgeons in Robotic surgery and is now a full time physician at CMC

providing patients with this state of the art procedure.

ROBOTIC ASSISTANCE IN UROLOGY:

The daVinci surgical robotic system made it possible to cure most urologic diseases and cancers without compromising the quality of life for patients.

Robotic prostate surgery enables surgical precision beyond the limits of the human hand. The 3-D view allows surgeons to clearly identify the delicate nerves and blood vessels around the prostate. Today, most prostate cancer patients (70% of cases in the United States) are successfully operated on using robotic surgery while maintaining normal bodily functions such as urinary control and erectile function.

In many cases, kidney tumors can be removed without damaging the remaining healthy portion of the kidney (partial nephrectomy) thanks to these robotic procedures. Many other urologic procedures can be performed safely and effectively with Robotic assistance such as: adrenalectomy, total nephrectomy, pyeloplasty, surgical treatment of urothelial tumors (bladder and upper urinary tract), treatment of uro-genital prolapse (sacro-colpo-pxy), lymph node dissection, and some cases of complicated urinary stones.

INFOS

SE TENIR DEBOUT PROLONGE L'ESPÉRANCE DE VIE

Selon une étude menée par des chercheurs britanniques et publié par le «British Medical Journal», le 9 juin dernier, réduire de deux heures le temps passé devant sa télévision augmenterait d'un 4 ans l'espérance de vie. Outre la position assise, cette activité nous pousserait à grignoter.

En parallèle, une étude américaine, réalisée à partir d'anciennes enquêtes conduites en 2006 et 2010 auprès de la population américaine, a montré que passer plus de temps debout serait bon pour la santé et pourrait nous faire gagner 2 ans d'espérance de vie. Cela augmente les dépenses énergétiques et évite que la graisse non consommée se stocke dans les vaisseaux sanguins et provoque maladies et prise de poids.

En limitant à trois heures le temps passé assis ou allongé, les risques de maladies cardiovasculaires, d'obésité mais aussi de cancers seraient donc diminués.

Ces trois heures comprennent le temps passé transports, celui des repas mais aussi de certains loisirs. Une étude américaine a en effet montré qu'une pause d'une minute toutes les heures diminuerait le risque cardiovasculaire de 20 %. Même si cette étude n'est pas toujours compatible avec nos modes de vie, il ne faut pas oublier de pratiquer une activité physique régulière pour limiter la prise de poids et la sédentarité.



EDAN
ECG & Fetal Monitor



Neusoft
MRI & Multi Slice CT scanner



Mediland
Surgical Light & Table



CISA
Washer & Sterilizer



mindray



Ultrasound, Patient Monitor & Critical Care Equipment

TRANS-CATHETER AORTIC VALVE IMPLANTATION

Severe aortic stenosis is an advanced condition that can result in progressive shortness of breath on exertion, congestive heart failure, chest pain, syncope and death. Aortic stenosis is most commonly caused by progressive calcification of normal tri-leaflet aortic valve. The incidence increases with age. The typical age at presentation of calcification of a normal valve is in the 70s and 80s while aortic stenosis due to calcification of a bicuspid valve appears earlier, in the 40s and 50s. The incidence of aortic stenosis in the elderly population is 2-10%.

Aortic valve replacement (AVR) surgery has been the treatment of choice for symptomatic patients with severe aortic stenosis. The leading indication is degenerating calcific aortic stenosis. The replacement is made with a mechanical valve or a tissue valve. The mechanical valve is typically more durable (can last 20-30 years) while the tissue valve will last about 8 to 15 years. The downside of the mechanical valve is lifelong anticoagulation with its accompanying risk of bleeding or the risk of valve thrombosis if anticoagulation is suboptimal. Aortic valve surgery present also major complications including infection, bleeding, stroke, heart failure, irregular rhythm, pneumonia, kidney failure, heart block, valve failure and death.

Many patients who fit the indication for AVR are excluded because of important co-morbidities, especially with a growing aging population in Lebanon and the region. A much less invasive modality of treatment has recently emerged: Trans-catheter Aortic Valve Implantation (TAVI). This catheter-based technology is designed to implant a tissue valve via the trans-femoral or trans-apical approaches inside the natural aortic valve, therefore “replacing” the aortic valve. It has shown promising results in providing treatment options for patients with severe AS who are poor

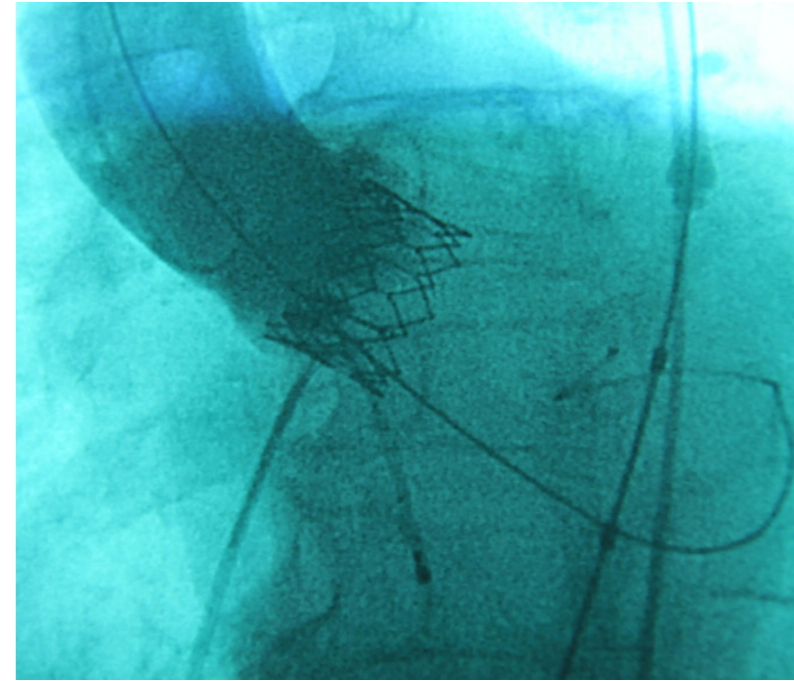


candidates for the open surgical approach, thus receiving CE and FDA approval for this specific patient population. Just recently, an FDA panel of heart experts voted in favor of expanded approval for Sapien valve.

The 2-year follow-up of the pivotal randomized PARTNER trial (Edwards SAPIEN) supports TAVI as an alternative to surgery in high-risk patients. The two treatments (TAVI and surgery) were similar with respect to mortality, reduction in symptoms, and improved valve hemodynamics. The safety and effectiveness of the Edwards SAPIEN THV, distributed by Benta Trading in Lebanon, was compared to best medical management (standard therapy) in inoperable patients with severe aortic stenosis. Despite expert care and frequent balloon aortic valvotomy, standard therapy failed to alter the very poor natural course of the disease. TAVI significant improved survival with a 20% absolute reduction in mortality.

There is no doubt that TAVI has resulted in a major trans-

formation of care in patients with high risk or inoperable severe AS and over 50,000 implants performed worldwide. The procedure was introduced to the Arab Middle East around two years ago and has just made its way to Lebanon. A team of interventional cardiologists, CT surgeons, anesthesiologists and cardiac imaging specialists has been created at UMC Rizk Hospital and AUBMC to reflect the collaboration of the two institutions in order to secure the success of this important endeavor. The 1st case was successfully performed by these two teams led by Drs Georges Ghanem & Ziyad Ghazzal and supported by Benta Trading on July 17, 2012 at UMCRH. An extensive list of candidate has been established but unfortunately the major challenge we are facing in Lebanon is the absence of any public or private reimbursement; a major challenge when we know that the cost of the procedure is estimated to be in the neighborhood of \$55,000. It will in the best interest of the Lebanese patients but also in the best of the country (if we seek a place in the health tourism in the region) to have this procedure reimbursed by thirds party payers.



INFOS

FAIRE DU SPORT APRÈS L'ÉCOLE

Pratiquer un sport d'équipe et se rendre à l'école à pieds ou en vélo réduiraient nettement l'obésité des adolescents, selon une étude américaine.

Des matches de foot aux cours de danses en passant par le volley ou le judo, les occasions ne manquent pas pour décompresser et se retrouver entre amis après les cours. Joignant l'utile à l'agréable, cette habitude permettrait aussi de préserver la santé des jeunes, selon une étude parue le 16 juillet dans la revue américaine *Pediatrics*. Et cela ne concerne pas seulement les petits Américains ou Chinois: la France est aussi concernée avec près de 20% des enfants de 3 à 17 ans obèses ou en surpoids.

En réalisant un sondage téléphonique auprès de 1700 collégiens, le Dr Keith Drake de la Geisel School of Medicine de Dartmouth (nord-est des États-Unis) et son équipe ont pu estimer que la pratique d'au moins deux sports d'équipe permettrait de réduire le nombre de jeunes obèses de 26%. Ils ont aussi calculé que si tous les ados

se rendaient au collège à pieds ou en vélo, il y aurait 22% d'obèses en moins parmi eux.

Des jeunes trop sédentaires en revanche, les cours de sport à l'école auraient peu d'impact sur le poids des adolescents, selon les chercheurs. En cause selon eux, un nombre insuffisant de séances dans la semaine et le peu de motivation qu'ils suscitent par rapport à une activité sportive réalisée en dehors du collège où ils peuvent se dépenser entre amis. Les auteurs de l'étude jugent ainsi nécessaire d'inscrire la pratique d'un sport d'équipe dans tous les programmes de prévention de l'obésité.

En France, le programme national nutrition-santé 2011-2015 recommande d'ailleurs d'augmenter l'activité physique et de lutter contre la sédentarité des enfants et des adolescents. La moitié d'entre eux seulement pratique une activité physique régulière, selon des chiffres de 2009 de l'Agence française de sécurité sanitaire des aliments.