Robot-assisted surgery at The Générale-Beaulieu Clinic

The latest Da Vinci® S robot is operational

The first operation with the «Da Vinci®» robot, advanced technology which is the pride and renown of the multi-disciplinary centre for robot-assisted laparoscopic surgery (CLR) of The Générale-Beaulieu Clinic, took place on January 8 2003. On January 8 2007, with several hundred successful operations achieved, the centre was equipped with the very latest model, the «Da Vinci® S», characterised mainly by its four robotic arms.

Dr Charles-Henry Rochat, in your capacity as a surgeon specialised in urological surgery, you have long experience with the Da Vinci surgical robot which has been established at The Générale-Beaulieu Clinic since 2003. The clinic has just been equipped with the latest generation «Da Vinci® S» robot. What are its principal characteristics and what is new, both for the surgeon and the patient?

Dr Charles-Henry Rochat: «The Da Vinci S is a robot with four integral arms, whilst with the old system the fourth arm was an insert. The articulation is of a totally new conception, much more slender with bigger displacement, resulting in no conflict between the robotic arms, which had a tendency to knock together with the old system. The instruments are longer which gives greater ease in the operating field, notably in operations which necessitate a transit from the top to the base of the abdomen. In addition, the «S» system allows for the integration of radiological images in the operator's field of vision, such as is possible in the cockpits of modern planes. Equally, one of the advantages of the new system is that it has an internet interface which permits videoconferences more easily with other centres.

For the surgeon the fourth integrated arm permits better exposure of the operating field and therefore better precision. Coupled with 3 dimensional vision, these elements of course, profit the patient by the high quality of surgery».

Survey on European scale from now to end of 2007

In 2005 you presided at the ERUS international congress which took place in Geneva and brought together the most important specialists in the field of robot-assisted laparoscopic surgery. Now, at the start of 2007 what is the progress of this surgical method in Switzerland and Europe? Do you have numerical information available ensuing from the research protocol adopted in 2005?

Dr Charles-Henry Rochat: «Following the ERUS congress which took place in Geneva in 2005, we created the European Group of Robotic Urology (EGRU) whose statutes of association are registered in Geneva. EGRU has developed a real time database on the internet which is an international first. This has enabled us to launch a multi-central study, comprising more than 10 centres, which started in September 2006. This will enable the evaluation of oncological results, that is to say that the healing of cancer and the functional results concerning recuperation of erectile and urinary function. The results will be published in a year but from this point on it can be seen that the factors concerning the control of cancer are excellent and that robotics give the possibility of extremely precise dissection allowing for excellent removal of the cancer. The other factor which is apparent is that the return of continence without any protection is much more rapid than with previous procedures. As regards erectile function, more time is needed for evaluation. It is important to realise that this is the first study of this scope in Europe carried out prospectively or within other information patients fill in on questionnaires concerning continence and erection before and during the months and years following surgery. At the end of the study we will have between 700-1000 cases to publish».

A rapidly progressing technology.

The Geneva University Hospitals (HUG) are also equipped today with a surgical robot. How do you see the development of this surgical technique in Geneva during the next 5 years compared to traditional methods of surgery? Is there any reluctance to the method any more in the medical world?

Dr Charles-Henry Rochat: «The Geneva University Hospitals (HUG) recently acquired a surgical robot, the fifth in Switzerland, whilst a sixth is scheduled for the Bern University Hospital during the course of the winter. This clearly shows the interest shown in this technology. The limiting factor today rests uniquely with the operating costs, from whence comes a certain understood reluctance. Notwithstanding, from the macroeconomic point of view it is a technology with proven savings, taking into account its micro-invasive technique with very rapid return of patients to their professional activities. Certain Swiss Insurers urge their clients to undergo prostate surgery with the aid of robotics. If we take for example the USA, half the radical prostatectomies for cancer are carried out with the Da Vinci system as opposed to 10% 2 years ago. I leave you to extrapolate the percentage of cases which will be operated on in the traditional method in 5 years time».

The motivating force behind the Clinic

Monsieur Cassegrain, The Générale-Beaulieu Clinic was one of the first establishments in Switzerland to be equipped with the Da Vinci® robot, a cutting edge technology which at the time in 2003, was a subject of contention in the medical world. You acquired the all new generation robot with 4 arms at the beginning of 2007. In your opinion does this confirm the success of this technology both with the clientele and the medical body?

Philippe Cassegrain: «The robot has its followers within the medical body. We can count positively the number of trained surgeons in robot-assisted surgery now, compared to 2003. It is equally interesting to note that the number of specialist branches interested in the robot are more numerous than at the beginning. It would seem that surgery of the digestive system is making a rapid expansion after that of urology. In the USA, robot-assisted operations in gynaecology have shown an exponential curve. No doubt this trend will occur in Switzerland. It may be noted that some gynaecologists have already undergone training in the use of the robot.
We notice that more and more well-informed patients make a request to be operated on by a surgeon who uses the surgical robot».

This cutting edge technology involves major investment. The Générale-Beaulieu Clinic is characterised by an avant-garde policy as regards equipment and quality standards which implies costs and choices. How did you come to the conclusion that the clinic needed to be equipped with the Da Vinci® S robot? Was the earlier robot already obsolete after 3 years?

Philippe Cassegrain: «Medicine cannot elude technology; quite to the contrary. As with all high-level technology, one must be flexible, responsive and capable of reacting very quickly to technological progress. The surgeons who use the equipment convinced us that the technological leap between the robot with three arms, which we possessed, and the new Da Vinci® S robot was sufficiently great that we had to acquire it. Its design also allows it to be used for other surgical interventions and it was the latter which absolutely convinced us that this was the right time to order the latest version».

CLR statistics:

- 324 cases treated since January 2003
- 206 cancer prostectomies
- More than 30 kidney operations
- More than 70 digestive system operations
- Various cases in urology and gynaecology

More information available on the CLR site: www.cancer-prostate.ch