

Laparoscopic Surgery Education and a Multinational Project for Distance Learning

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Background: Videoscopic surgery is one of the most important innovations in surgery, and has brought great benefit to patients thanks to its minimally invasive character

Objectives: The main objective is to promote the exchange of knowledge about videoscopic surgery and establish a surgical network with a high quality moving image over the broadband internet access.

Materials and Methods: Having the "Portable Wireless Live Video/Audio Transmission System (IMD) and using Digital Video Transport System (DVTS) and the audio and video content from the operation room or meeting room can be transmitted easily to the remote sites.

Results: Surgeon applicants who have a computer and basic internet connection will be easily connected online to the operation and conference rooms, and follow in real time and even use it interactively.

Conclusions: Low-bandwidth, internet-based telemedicine is effective and inexpensive. Surgeons living in remote areas, distant countries and especially those with limited resources, can follow the videoscopic courses, meetings, and live surgeries organized by experienced centers, on their computer screen, in real-time and interactively.

Keywords: Video Assisted Surgery; Telemedicine; Education; Webcasts

1. Background

Videoscopic surgery is one of the most important innovations in surgery, and has brought great benefit to patients thanks to its minimally invasive character. Since the first laparoscopic cholecystectomy performed by Dr. Mouret in Lyon in 1987, it was great progress both technically and operationally. Nowadays, it is possible to achieve almost all operations via videoscopes by experienced surgeons. Besides, Education and Training have also been tremendously influenced, with a completely point of view at the problem. From the outset, the training and education of this new surgery were the first to solve problems for novice surgeons. The initial and advanced courses were practically the only ways to learn this new surgery, for senior and junior surgeons who were trained previously in conventional surgery. Then the videoscopic surgery was taught during the internship, so the initial courses not so considered. To this day, there are several training centers in different countries which continue to teach and train videoscopic surgery, organizing the advanced courses with live surgery and

other educational activities. The European School of Laparoscopic Surgery-E.S.L.S. at the Saint-Pierre University Hospital in Brussels directed by the Professor Guy-Bernard Cadière has been established for more than 18 years and is one of the oldest and the most important Schools of laparoscopic surgery in Europe. The very best experts of the world have come to teach there. Since its beginning, over 5000 fellows and surgeons have passed the courses. For years, these courses are endorsed by the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) and by the European Association for Endoscopic Surgery (EAES). The Medical Education and Research Center of Istanbul University- ISTEM directed by the Professor Levent Avtan, is also one of the best known, a very active academic center for telemedicine, education and teaching at distance in the country. The center has a meeting room with telemedicine links to the operating rooms of the hospital situated in our campus (Istanbul Çapa Hastanesi), other hospitals in Turkey and different countries for periodic educational courses and others activities. It has a meeting room linking directly to the operating rooms of the hospital and a tele-

Implication for health policy/practice/research/medical education:

The present study promotes the exchange of knowledge about the videoscopic surgery and establishes a surgical network with a high-quality moving image over the broadband internet access.

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and conference room via hospital network which will be linked to our "Live Video/Audio Transmission System. The video content will be sent via the broadband internet dedicated, minimum 1, better 2 Mbps, to our giant main server, and then, everything will be distributed to individual receivers (Figure 2). Surgeon applicants having a basic internet connection must register in advance to get an access code. By this code, they will be easily connected online to operation and conference rooms and thus follows the surgery in real time and even interactively (if they want they can ask questions by phone or chat).

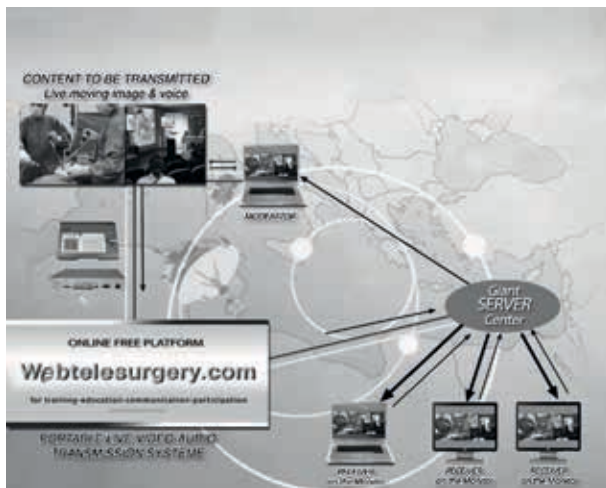


Figure 2. The Network Configuration

4. Results

Today, videoscopic surgery is widely used in the world and its trainings still important. Telemedicine and Distance Education have predominant role in training of surgeons, particularly in videoscopic surgery. European School of Laparoscopic Surgery (E.S.L.S.) in Brussels and ISTEM & E.L.C.D. in Istanbul, are well-known in their respective countries, in Videoscopic Surgery. Those three institutions have recently created a project about tele-training and tele-teaching. They would like to make a contract with MMESA (Mediterranean and Middle Eastern Endoscopic Surgery Association) for doing videoscopic surgery from distance places. The courses and activities

in well-known European institutions, using webtelesurgery.com platform, are sent by broadband internet system to the countries of MMESA. The applicant surgeons can be connected very easily to be able to use the courses and trainings at a very low cost effect, needing a computer and simple internet connection. This is why we are expecting a very good progression and continuation for this surgical method.

5. Discussions

Low-bandwidth, internet-based telemedicine is effective and inexpensive (5). Surgeons living in remote areas, distant countries and especially those with limited resources, can follow the videoscopic courses, meetings, and live surgeries organized by experienced centers, on their computer screen, in real-time and interactively.

Authors' Contribution

There is no one contributed in this journal.

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