



Live recording and interactive retransmission of endoscopic nasosinusual surgery at the Hospital Clínico Universitario of Valladolid

User

Otorhinolaryngology ENT department at Hospital Clínico Universitario of Valladolid



The Hospital Clínico Universitario de Valladolid is the reference hospital in the Autonomous Community of Castilla y León and covers a population area of 235,000 citizens. It has 777 beds and a staff of 3,500 professionals, with more than 140,000 patients attended annually. As one of the 6 clinical hospitals in Spain, it has a close link with the University of Medicine of the University of Valladolid and a deep vocation for care, teaching and research.

Challenge

Recording and live broadcasting with interaction of the participants of the IX Course "Practical concepts of endoscopic nasosinusual surgery" at the Hospital Clínico Universitario of Valladolid

The IX Course "Practical concepts in endoscopic nasosinusual surgery" held in Valladolid from June 27 to 30, 2018 has been addressed to otorhinolaryngology ENT specialists or residents, who would like to start or increase their knowledge in this surgery. The Course has included two practical days with live surgical sessions and bidirectional connection with the surgical team, with the aim of acquiring new skills and knowledge in endoscopic nasosinusual surgery.

Solution

Image integration system in the operating room "ORVM - Operating Room Video Manager", for the management of image data and video produced in the operating room, including the acquisition, recording, broadcasting and retransmission by streaming of nasosinusual endoscopies.

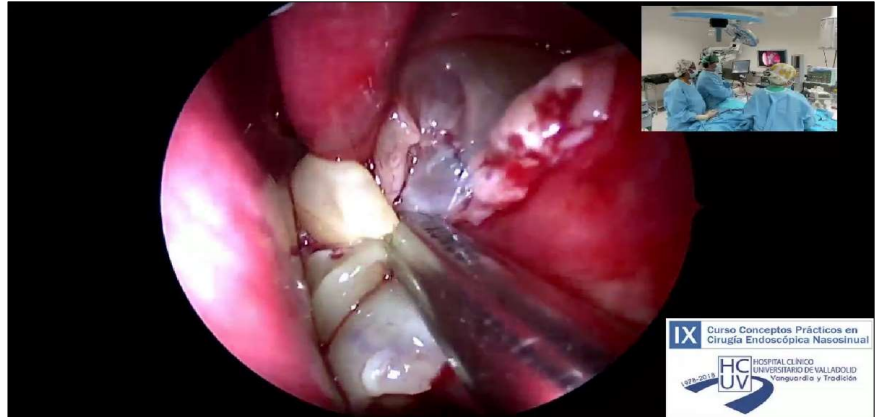
The participants were able to attend different endoscopic nasosinusual surgery procedures live via streaming and participate interactively with the surgeons. This event was carried out with an image integration system in the operating room, specifically with the ORVM - Operating Room Video Manager - software module for acquisition, recording, broadcasting and streaming. The objective of the live surgeries was that a large number of students could remotely attend the interventions, visualizing the same image that the surgeons saw through the endoscopy equipment, commenting with the students on what was happening in the intervention and answering any questions or doubts that they might have during the operation in real time.

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Solution

Through the image integration system in operating room "ORVM - Operating Room Video Manager", a bidirectional communication between the operating room and the teaching room was carried out, giving the students the opportunity to witness several live endoscopic nasosinusal surgery sessions, without entering the operating room.

These are some photographs of the recording and live interactive broadcast of several endoscopic surgeries performed by Dr. Jaime Santos (Hospital Clínico Universitario of Valladolid), Dr. Roy Casiano (University of Miami), Dr. Alfredo García (Hospital 12 Octubre of Madrid) and Dr. Nieves Mata (Hospital Universitario of Torrejón, Madrid).



During the retransmissions, two video signals were captured for broadcast via streaming:

- Video produced by the live endoscopy team.
- Ambient camera video through which the surgical professional commented on the actions performed on the patient, the material used in the intervention or the layout of the operating room.

The technological means used to carry out the course were the following:

- Hardware elements: 42" medical grade workstation, endoscopy equipment signal acquisition device and camera/audio environment in the operating room; in the classroom, projection/audio system and wireless microphones.
- Software elements: ORVM - Operating Room Video Manager, for the management and diffusion of the video produced in the operating room, as well as Microsoft Lync to maintain interactive communication between the operating room and the classroom.
- Human elements: technical staff necessary for the realization of this recording and live interactive retransmission of the interventions.

Feedback

"Everything was easy and dynamic, thanks to the interactivity between operating room and classroom. The recordings will make teaching easier for new students"

"Image quality and live communication are the keys to success. We will repeat the experience".

"The retransmission of the surgeries performed was very easy and dynamic, thanks to the interactivity between the operating room and the classroom".

"Having the recordings of the surgeries performed will facilitate teaching for new students"

Santos Pérez

specialist and coordinator of the course at the Hospital Clínico Universitario of Valladolid.

Dr. Jaime

Otorhinolaryngology

"The endoscopic image quality and live communication with our trainees allowed the surgical case sessions to be a success."

very satisfied. We will repeat the experience in future courses"

Pérez

Service and director of the Course Hospital Clínico Universitario of Valladolid.

"We are

Dr. Darío Moráis

Head of Otorhinolaryngology