[English translation of the first Japanese Edition]

Proposed Guidelines to Live Presentations of Thoracic and Cardiovascular Surgery

Introduction

Thanks to the development of information technology (IT) including video technology, it has become possible to broadcast surgical operations in real time from health care facilities. This allows the simultaneous live presentation of both overviews and the details of surgical procedures to large audiences, rather than just conventional on-site observation. In addition, live surgery conferences have been introduced in many fields of surgery because immediate question-and-answer exchanges can take place, and viewers are allowed insights into the surgeons' decision-making processes.

There is an educational significance to live surgery because it conveys the realities and tensions of the practice of surgery while bringing to light the performance of highly practiced surgeons in real time in a manner relevant to the IT age. However, in the clinical context of operating on an individual patient, it is as always crucial not only to perform at peak ability but at the same time to safeguard that patient's rights. Informed consent must be obtained with great consideration from each patient, whose safety must be of prime concern at all times. In live surgery, the maintenance of safety in the operative procedures themselves is a *sine qua non.* But also present are ethical questions, the need for preservation of privacy, and the live aspect of the situation—all further causes of stress for the surgeon—as well as many other concerns, including the need to cope with both expected and unexpected complications. In addition, it is important to bear in mind that the video record of surgical procedures is not only presentable as live surgery, but is also almost equally significant in the form of a preserved video resource.

We believe that, with live surgery already in progress in various academic societies and associations, the prompt establishment of criteria for safety and of measures for handling unexpected circumstances is now essential. In the same spirit, the Japanese Society for Cardiovascular Surgery, the Japanese Association for Thoracic Surgery and the Japanese Society for Vascular Surgery have collaborated in the development of the present proposal.

I. Main Points

1) Aims of Live Surgery

Live surgery is aimed at personnel working in clinical medicine, particularly doctors, so as to provide them with general instruction in surgery. Accordingly, it is not intended to provide highly technical information or to teach rarely used surgical techniques. Such specialized education should be sought after by moderately experienced individuals in advanced courses in the form of direct instruction by highly trained specialists. Furthermore, live surgery is not intended to provide a stage for displays of surgical expertise.

From this standpoint, live surgery should ideally show straightforward operations to offer an overview of relevant surgical techniques and procedures. In addition to these, there is educational value in showing the decision-making processes, surgical equipment, surgical support systems such as the processes related to anesthesia and the selection of larger-scale surgical equipment. Thus, live surgery must be a medium through which educational value is offered by well-experienced surgeons to a wide medical audience.

2) Ethical Matters

Even though the aim of live surgery is education, it is also a part of the patient's treatment, and so emphasis must be placed on establishing and maintaining a satisfactory relationship of trust between the surgical team and the patient. For this to be achieved, before the patient is asked to give consent for live surgery, a full explanation must be given of the procedures and special environments in which they will take place.

(1) Not only must approval be obtained both from the patient when in a sound state of mind, and from the Ethics Committee of the institution where the operation is to be conducted.

(2) In obtaining informed consent, it is necessary to explain to the patient that, apart from the possibility that the educational aspect may generate new treatments in the future, the fact that the surgery is conducted and broadcast through a live medium results in no actual benefit to the patient, but in fact, a higher risk. This is because, in creating an environment other than that to which the surgeon is accustomed, and in the attraction of a large audience to the operation, the surgeon's decision-making process can be influenced, his or

her stress levels raised, and the possibility of not reaching peak performance augmented.

(3) This informed consent must be obtained directly by the surgeon from the patient, on paper.

(4) In order to ensure complete patient privacy, personal information must be meticulously managed. In live surgery also, great care must be taken with display procedures, so that no information be disclosed.

3) Selection of Patients

Patients selected should be restricted to those with ailments frequently encountered in medical practice and those requiring general surgical procedures. However, even amongst those requiring general surgical treatment, patients with ailments that have high mortality rates should be avoided for reasons of safety. The reason for this is that, in case of any mishap, it is extremely difficult to determine whether the mishap was due to the risks involved in live surgery or to those inherent in the patient's condition.

Furthermore, illnesses that give rise to discussion about operative procedure are deemed inappropriate for live surgery. Discussion immediately before or during an operation lowers the surgeon's concentration, and affects surgical performance, possibility resulting in less than optimum treatment for the patient. For the viewers, when discussion on a case is necessary, it is more helpful to use existing video footage in order to clarify any problematic points.

4) Selection of Operative Procedure

In order to demonstrate reliable basic procedures that are applicable over an extensive clinical range, it is desirable to perform live surgery using standardized techniques that can be used in a wide variety of cases. Therefore, the use, for live surgery, of difficult operative techniques requiring high technical skills is not ideal. Those selected for live surgery should be strictly limited to procedures that have been ethically approved through careful discussion in a preoperative conference.

5) Requirements in the Selection of a Facility

All of the following conditions must be satisfied:

(1) Patients are accorded consideration and their rights are respected.

(2) There must be social transparency and disclosure of appropriate information.

(3) All medical practitioners, including thoracic and cardiovascular surgeons, anesthetists, clinical equipment technicians, and nurses must all be highly experienced and must all, together with the director of the facility, be in favor of the objectives of live surgery.

(4) Recognition by the relevant academic societies as an educational facility for cardiovascular and thoracic surgery.

6) Requirements in the Selection of a Surgeon

The surgeon is carefully scrutinized beforehand in the relevant field(s) of the academic or research societies that sponsor live surgery, and must be well qualified in those fields. The following conditions must be satisfied:

(1) The surgeon must have a good knowledge and adequate experience of the relevant procedure and must be actively involved in using these on a daily basis.

(2) The surgeon must have a good understanding of, and must be able to respect and defer to, the purposes of live surgery, and in particular, must be able to avoid any ostentatious behavior.

(3) The surgeon must be a board certified surgeon.

7) Relationship between the Surgeon and the Facility

As a rule, the surgeon will perform live surgery in the institution to which he or she belongs. If for some reason the surgeon operates in some other institution, preparations must be made to achieve an environment and facilities as similar to those of the original institution as possible.

8) Preoperative Conference

Regarding planning for a live surgery session, the responsibility is assumed by the academic or research society that is sponsoring the session. In the relevant department, a conference attended by the surgeon should be held beforehand, and confirmation of matters related to safety standards and ethical principles should be made. The content of the conference must be disclosed beforehand to those intending to watch the session of live surgery.

9) Relationships with Private Companies

The new equipment and devices used in live surgery must be strictly limited to those deemed essential from the viewpoint of scientific significance, and any usage for solely commercial purposes must be avoided, even if no monetary exchange is involved.

10) Conditions Applying to Audiences

The audience should be restricted to members of the relevant academic and research societies who must be qualified or actively involved in the medical field, who understand the aims of live surgery and who have respect for patients' rights. Rather than seeking to experience simply the 'reality' or the 'feeling' of the clinical setting, those who are watching a session of live surgery should be observing from the standpoint of the surgeon, who bears the responsibility for the patient; they should also be constantly considering the suitability of the surgical techniques selected, and automatically filtering their own questions for need and appropriateness and practicing restraint in their timing.

11) Video recording procedures

Video recording during live surgery should not, in the quest for superior images, be allowed to interfere with the surgical activities in progress. Although the surgeon may show consideration for the needs of video recording, he or she must not allow either the quality or the efficiency of surgical technique to deteriorate for the sake of superior imaging.

12) The Usefulness of Other Media (Video, etc.)

The use of other media, such as video, can be even more educationally productive than live surgery, if used creatively, although the real-time aspect is not present. There are two effective ways of presentation: (1) as a well-edited version focusing on operative technique, and (2) as an unedited video that can show the whole surgical procedure, as in live surgery. This medium offers the advantages that the surgeon can be present at the time of viewing and can take part in discussions of the operation, and also the video may be replayed to show details of surgical technique. Moreover, as the costs of live broadcasting can be eliminated, there is less restriction on time for the program and less stress weighing upon the surgeon.

On the basis of the above points, the choice may be made between live and video surgery.

13) Verification of Prognosis and Final Assessment

When a fixed interval has elapsed after live surgery, the surgeon must report on the postoperative course followed by the patient at an organized Society or research meeting. By this means, the body organizing such a meeting can investigate each of the cases in which live surgery has been conducted, and assesses the appropriateness of the use of live surgery in each. If some problem, such as a serious complication attributable to the surgery, is identified, it is closely investigated, and the results are reported at the next Society or research meeting. As far as more important matters are concerned, evaluations by outside organizations must be accepted, and impartiality and transparency upheld.

II. Conclusion

With regard to the execution of live surgery, it must be recognized that it is merely one link in the chain of medical treatment for the patient, and the members of the organizing body, the surgeon, the operators of the facilities, and, moreover, all the participants in these activities must have an uncompromising understanding that the aim is the education of medical staff, and they must give first priority to the safety of the patient. Considering the risks of live surgery, serious thought should be given to the introduction of a painstaking system of conferences using videos that embody the actual process of surgery, unlike the conventional, short video sessions.

The Japanese Society for Cardiovascular Surgery, the Japanese Association for Thoracic Surgery and the Japanese Society for Vascular Surgery earnestly hope that these guidelines will be strictly observed in the presentation of live surgery.

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Japanese Society for Cardiovascular Surgery
Japanese Association for Thoracic Surgery
Japanese Society for Vascular Surgery

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