Film Review

ICI Historical Anaesthesia Videotapes

Information on availability of these films may be obtained from ICI Pharma Canada, 2505 Meadowvale Blvd., Mississauga, Ontario, L5N 5R7.

A series of 12 black and white films, now on videotape, was made for Imperial Chemical Industries (ICI) at teaching hospitals in London, England during the 1940's. They provide interesting documentation of the stage that anaesthesia had reached 40 years ago. One film is devoted to the techniques of oral and nasal tracheal intubation, in the remainder intubation is rarely mentioned. Muscle relaxants, disposable needles, plastic intravenous cannulae, suction apparatus, electrocardiogram, and oxygen monitors were still in the future. Nevertheless, there is much to be learned from these films. Preparation and checking of necessary equipment, review of the patient's medical record, safe care of the patient, and legible anaesthetic records are emphasized.

The films are educational and, at times, humorous. They are well produced with good photography, effective use of lighting, clear diagrams, and concise commentary. Each one lasts approximately 30 minutes. Those marked with an asterisk (*) are considered the best and would be suitable for use at department rounds or journal club meetings. Viewers should be reminded of the era in which the films were produced. Resources were very limited, yet a skilled and experienced anaesthetist could provide good anaesthesia for many surgical procedures. Nevertheless, it will be recognized how bad anaesthesia could be, and how much our speciality has advanced in the intervening years.

1 *The Signs and Stages of Anaesthesia 1945*

Guedel's signs of ether anaesthesia are discussed in detail with the use of charts. The changes in respiration, laryngeal reflex, eye and pupillary signs from the first stage to overdose are described. These are also demonstrated in patients during ether anaesthesia.

2 *Open Drop Ether 1944**

There is now a generation of specialist anaesthetists who have never used or seen open drop ether. This film shows how it should be done, how it should not be done, and how to deal with complications. Because ether is a good analgesic and muscle relaxant even upper abdominal surgery was possible and satisfactory conditions are

shown during a gastrotomy. In addition to its historical interest this film may be useful to any anaesthetist who contemplates working or teaching anaesthesia in a third world country.

3 *Nitrous Oxide Oxygen Ether Anaesthesia 1944*

A forerunner of our present-day anaesthetic machine is shown. There is a description of the machine, its compressed gas cylinders, flow meters, and the Magill anaesthetic circuit. A careful preoperative check of the equipment, and of the patient's medical record, teeth, and airway are emphasized. A commonly used anaesthetic sequence of that era is shown: induction using 100 per cent nitrous oxide, progressing to a mildly hypoxic nitrous oxide oxygen ether sequence.

4 *The Carbon Dioxide Absorption Technique 1944**

It would be difficult to improve on the excellent diagrams which are used to show the movement of gases in the anaesthetic circuit. The correct method of filling a soda lime canister is demonstrated. Both types of closed circuit are demonstrated, the Waters' to and fro circuit, and the circle system with the vaporizer inside the circle. Both circuits are shown in clinical use.

5 *Endotracheal Anaesthesia 1944**

Magill, who provides his own commentary, demonstrates intubation by the oral and nasal routes before the days of muscle relaxants. Viewers today may be amused by the apparatus considered essential, and by his comment that "to make an endotracheal tube is a simple matter." He demonstrates how to do this by cutting a suitable length from a coil of red rubber tubing and smoothing the ends with an emery file. Diagrams and views of the upper airway are excellent, and Magill's classic description of positioning of the patient's head like "a man sniffing the air" is demonstrated.

6 *Intravenous Anaesthesia Part 1 1944**

The first part of this film shows the amount of preparation required to give an intravenous injection before disposable syringes and needles were available. When a hooked needle is found the anaesthetist must "touch up the point with a sterile hone." Sterile distilled water was usually available to dissolve thiopentone powder, although "melted snow can be used in an emergency"! Use of intermittent intravenous thiopentone as the sole agent for repair of

an inguinal hernia is demonstrated. Depth of anaesthesia is judged by: no movement = deep enough; still breathing = not too deep.

7 (*Intravenous Anaesthesia Part 2 – not available*)

8 *Spinal Anaesthesia 1944**

Normal and abnormal anatomy of the spine are followed by correct posture of the patient in the sitting and lateral positions for lumbar puncture. Storage of sterile needles and ampules in lysol solution, to be rinsed in distilled water before use, makes one appreciate the convenience and safety of prepackaged equipment in the 1980's. A specially constructed glass tube to represent the spinal canal is used to demonstrate the spread of dye-containing hyperbaric and hypobaric solutions. Techniques of spinal anaesthesia are demonstrated in patients, with discussion of risks and complications.

9 *Respiratory and Cardiac Arrest 1945*

Little of benefit can be learned from this film, except to realise how primitive was the art of resuscitation forty years ago.

10 *Operative Shock 1945*

Some of the explanations of so-called operative shock are unconvincing in light of present-day knowledge. However, it is refreshing to hear a non-jargon description of a patient in shock as "pale, cold, clammy, with the pulse rapid and feeble." Also, with shock supposedly caused by a rough surgeon, the admonition "remember, it may be your fault for not producing adequate muscular relaxation."

11 *Handling and Care of the Patient 1944**

The first part of this film is devoted to lack of consideration for the patient which so easily occurs before and during induction of anaesthesia. The patient is left alone in strange surroundings, the anaesthetist arrives late and checks his equipment in front of the patient without speaking to her, doors are left open so that the patient sees the surgical team handling the pathological specimen from the previous case. A similar sequence follows in which everything is done correctly. Correct care of the patient in the operating room and on return to the ward (before the days of recovery rooms) is demonstrated. When putting patients back into their own beds never place them on unprotected hot water bottles!

12 *Anaesthesia in the Dental Chair 1948*

The vertical (not reclining) sitting position in the dental chair is considered important. Complete anaesthesia (not

just analgesia) using nitrous oxide is shown, starting with 100 per cent nitrous oxide for induction with some air or oxygen added later for maintenance. For many years this was a common and accepted technique even though some degree of hypoxaemia was inevitable. This is clear from comments that "oxygen lack should not be pushed to the stage of jactitation as a sign of anaesthesia" and "cyanosis is an unreliable guide to the depth of anaesthesia."

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