

Conference Summary

Monitoring and anaesthesia

Introduction

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"Monitoring in Anaesthesia" was the title of the third annual conference organised by the Department of Anaesthesia, University of Calgary, held in Calgary, Alberta on November 19, 1983.

The programme was divided into three parts: Critical organs, the Anaesthetic machine, and the Interface between patient and anaesthetist.

In the first section, Dr. A.M. Lam (London), after noting the limitations of monitoring the brain during anaesthesia, reviewed cerebral haemodynamics, metabolism and function. In particular, he pointed out the potential value of sensory evoked responses as a promising monitor of brain electrical activity during anaesthesia. Then, various methods of measurements of carbon dioxide and oxygen for assessing the lung were discussed by Dr. R.J. Byrick (Toronto). In addition, he stressed that inspired oxygen concentration, airway pressure, and disconnect alarms should always be monitored since they are vital to patient safety. Dr. R.G. Merin (Houston) spoke on cardiac function and myocardial perfusion and oxygenation and stressed that monitoring the rate pressure product was of little value since the implications of changes in heart rate and arterial blood pressure are significantly different. Dr. D.R. Bevan (Montreal) gave a spirited account of renal physiology during anaesthesia and, in particular, noted that urine output alone was not a reliable index of renal function. He explained that solute excretion was more important than urine volume. In reviewing liver function, Dr. Leo Strunin

(Calgary) indicated that currently available tests are of limited use to assess hepatic reserve in potential surgical patients. However, postoperative assessment of hepatic dysfunction was important to rule out anaesthetic-related causes.

In the second section, Dr. D.B. Craig (Winnipeg) in a contribution entitled "Murphy's Law and the Anaesthetic Machine," drew attention to the publications of the Canadian Standards Association in regard to anaesthetic machines. Four important points emerged: equipment meeting current standards, effective maintenance, pre-use equipment checks, and, mostly importantly, operator training and vigilance.

In the third section, Dr. J.M. Davies (Calgary) reviewed the methods available for assessing morbidity and mortality in relation to anaesthesia and the performance of the anaesthetist. These methods ranged from anecdotal tales to costly prospective studies and she concluded that anaesthesia was one of the specialties which was attempting to carry out such studies. Postoperative assessment of the effects of anaesthetic agents was highlighted by Dr. J.R. Maltby (Calgary) who described the International Multi-centre Study of General Anaesthesia which is now in progress in ten North American centres. Finally, Dr. F.N. Brown (Ottawa) drew attention to the increasing number of new malpractice lawsuits in Canada in general and involving anaesthetists, in the areas of injury to dental work, obstetric analgesia and resuscitation of the newborn, as well as patients sustaining death or brain damage following hypoxic incidents.

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