

"As continuous caudal analgesia exerts its most profound influence from below upward . . . so does lumbar peridural analgesia exert its influence from above downward. Either of the techniques presents the anatomical avenue for anaesthesia or for therapy of the organ or segment involved.

"Continuous caudal analgesia is the safest and most effective technic . . . for operative and postoperative pain relief in haemorrhoidectomy, prostatectomy and for operations on the perineum. By extending the levels of nerve block into the low thoracic plexus, adequate anaesthesia is produced for hernioplasty, appendectomy and cesarean section. . . . We have extended dosage schedules and optimum concentrations of procaine, "metycaine," "pontocaine," "nupercaine" and the safe and effective local analgesic from Sweden . . . "xylocaine." No references."

D. K. K.

SEEVERS, M. H.: *Symposium: Anesthesia in Otolaryngologic Surgery. I. The Preparation of the Patient.* Tr. Am. Acad. Ophth. 281-287 (March-April) 1949.

"Drugs are used prior to anesthesia for four principal purposes. 1. The induction of mental equanimity. 2. The abolition of pain. 3. Correction of existing physiologic and biochemical abnormalities related to disease or to the condition for which surgery is indicated. 4. Protection of the patient from the potential toxicity of the agents used for anesthesia. Of the compounds available for the relief of apprehension and for the induction of a proper mental state prior to anesthesia, morphine is unsurpassed and remains the standard for comparison. Its congeners, dilaudid, pantopon, and other opium preparations, possess little or no outstanding advantage over morphine except possibly as a concession to

those individuals who are purportedly sensitive to morphine. . . . Their value is enhanced if used in conjunction with scopolamine. . . . The resulting amnesia is especially valuable in patients who are to receive only local or regional anesthesia. Furthermore, scopolamine in appropriate dosage in adults tends to counteract to some extent the respiratory depression of morphine and its derivatives. Codeine and demerol hydrochloride are poor substitutes for the more potent agents in most adults. . . .

"Methadon hydrochloride, . . . is a disappointment for purposes of premedication since it does not possess the required sedative properties except in doses which seriously depress respiration and other vital mechanisms. . . . The barbiturates as a class are greatly inferior to the opiates except for certain specific purposes. Although sedatives in the broad sense of the term are useful to induce restful sleep the night prior to operation and as possible adjuncts to morphine in individuals who are to receive only local or regional anesthesia, they do not induce the desirable dreamy and euphoric states which result so characteristically and desirably from the opiates. . . . It is futile to attempt to offer here, as it is dangerous to apply in the clinic, a rule of thumb for premedication. It is the inevitable tendency to err on the part of too much, rather than too little, premedication. . . . It must be appreciated that the distinction between analgesic, sedative, and anesthetic agents is a man-made one and is entirely arbitrary. Qualitatively the action of these compounds on vital mechanisms is more or less the same, with the result that summation of the effects of several drugs may result in overwhelming depression of some vital structures. . . . It is largely in the province of the internist to see that individuals with the common metabolic and endo-

crine diseases, such as diabetes mellitus, Addison's disease, thyroid disease and the like, are properly medicated with their respective specific treatment prior to anesthesia and operation. . . . Individuals who have long been exposed to certain depressant drugs acquire a clear-cut and high grade tolerance to these compounds. This is particularly true of the opiates and alcohol. It goes without saying that it is difficult to handle a morphine addict during anesthesia since he also has a marked cross tolerance to other depressant compounds. The new analgesic, methadon hydrochloride, is virtually ideal for treating individuals of this type prior to operation since it substitutes satisfactorily for morphine and will depress the individuals to a state where a minimum of anesthetic agent is required. Preparation of alcoholics for anesthesia involves either heavy premedication with alcohol or some alcohol-like substance such as paraldehyde. . . .

"Unless time will not permit, shock should be treated by the usual methods of fluid restoration, plasma and blood before an attempt is made to carry on anesthesia. One situation which should be stressed is the reaction to anesthesia of individuals who are in severe acidosis, particularly of the metabolic type, which is usually of renal origin. . . . Every type of premedication which involves severe respiratory depression superimposes an acidosis of respiratory origin, which may, under certain circumstances, affect the circulatory system adversely, or even result in signs of excitation or convulsions during or following anesthesia. . . . We know now that cardiac death from chloroform and many other hydrocarbons is not due specifically to vagal stimulation but to an alteration in conductivity and irritability of the cardiac muscle so that this particular type of protection is considered to be

no longer valid. None the less atropine and other anticholinergic agents are still used to dry up secretions, prevent potential stoppage of the heart by manipulation of the vagus or carotid sinus in operations of the neck, and purportedly to prevent reflex laryngospasm originating from pain incidental to the operation, particularly under pentothal, cyclopropane, and agents which do not obtund the laryngeal reflex. It should be clearly pointed out that atropine is not a satisfactory drug for this purpose since it does not prevent contraction of the striated muscles of the larynx to such types of stimuli. It is possible, however, by the appropriate use of curare (intocostrin or d-tubocurarine chloride) to reduce the activity of these striated muscles. These drugs have been used specifically for this purpose. Undoubtedly the most commonly used practice for the prevention of toxicity is that involving premedication with the barbiturates to prevent potential toxicity from local anesthetics. Most physicians have adopted this practice as rule of thumb. In reality we are living in a fool's paradise since the quantity of barbiturates ordinarily administered for this purpose is entirely inadequate to prevent anything but the most minor manifestations of toxicity from these agents. . . . It should be clearly understood that certain types of death from local anesthesia, namely those in which rapid absorption occurs from highly vascular areas, are not antidoted at all by barbiturates. . . . Another type of premedication which involves protection against toxicity is that related to prevention of ventricular fibrillation following spontaneous sensitization of the heart to endogenous or administered epinephrine or that induced by certain hydrocarbons, particularly chloroform and cyclopropane. Papers are now appearing in which it is stated that this serious haz-

ard can be largely prevented by the previous intravenous administration of procaine in 0.1 per cent solution at a rate of approximately 1 Gm. per hour. . . .

"It is also well established that procaine reduces the electrical excitability of the heart. Individuals, therefore, in whom the heart is to be subjected to any unusual influence of reflex or chemical origin, are proper subjects for procaine begun prior to anesthesia and continued throughout its course. It has been clearly shown experimentally that many other drugs reduce the excitability of the heart—drugs which reduce electrical excitability, such as quinidine; drugs which have sympatholytic effects, such as

ergotoxine; adrenergic blocking agents like dibenamine; and, in all probability, most compounds which reduce blood pressure or prevent rises in blood pressure incidental to the operation, since it is now clearly established that pressure is one of the factors involving sensitivity of the heart to epinephrine and the hydrocarbons. Numerous other protective agents used prior to anesthesia may be cited: pressor compounds such as ephedrine and the like to prevent the pressure fall in spinal anesthesia, and the new curare-like agent, myanesin, which is at present in experimental use as a preliminary adjuvant to barbiturates and gas anesthesia."

J. C. M. C.

AMERICAN SOCIETY FOR THE ADVANCEMENT OF GENERAL ANESTHESIA IN DENTISTRY

The FALL MEETING of the American Society for the Advancement of General Anesthesia in Dentistry will be held Monday evening, October 23, 1950, at the SHELburne HOTEL, Lexington Avenue at 37th Street in New York City.

The scientific program will consist of:

Dr. Max H. Jacobs, Boston, Mass. "Oral Surgery Procedures as Influenced by Anesthetic Technics."

Dr. M. L. Axelrod, Miami, Fla. "Increasing the Value of Nitrous Oxide with Trichlorethylene for General Anesthesia in Dentistry."

Discussion will be opened by Dr. Samuel A. Brandon, Portland, Ore.

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