Intracardiac E.C.G. in Pacemaker Electrode Insertion

Sir,—We have found the intracardiac E.C.G. a valuable technique in pacemaker electrode insertion in over 300 routine procedures when it was used as a supplement to fluoroscopy and in 10 “blind” emergency procedures without fluoroscopy.1 We present our experience to clarify certain aspects of the paper by Drs. G. Bay and E. Sivertssen (21 October 1967, page 838). To assess the position of the electrode tip at all times familiarity with the characteristic intracavitary patterns of S.V.C., I.V.C., pulmonary artery, and coronary sinus is needed, as well as the right atrium and right ventricle shown by these authors. The coronary sinus pattern is particularly important, because an initial low pacing threshold usually rises rapidly.2 The right ventricular E.C.G. from various areas does not differ sufficiently to position the electrode tip at the apex, which is the optimal site. The contact pattern shown by them needs further elucidation.

We have found that if the ST segment elevation is 1 mm or more and the early tip displacement is common.3 Also, advancing the electrode further may initially increase ST elevation, but after 0.5–1.0 cm ST depression supervenes. Withdrawal restores ST elevation. This is interpreted as an intramyocardial E.C.G. and a warning of the risk of complete myocardial perforation. When satisfactory ST elevation is obtained the patient should breathe rapidly and deeply and cough if possible. The ST elevation should not vary under these circumstances.

The electrode which they used was probably of the Ely type. We do not recommend its use in “blind” emergency procedures, especially if an arm vein is chosen for insertion. This flexible electrode is difficult to pass to the heart from the arm when the patient is in the supine position. We also use another arm vein, and, although percutaneous subclavian venepuncture is a faster approach, there is risk of pneumothorax in unskilled hands. We do not use external jugular veins, because they may be difficult to locate in shocked patients and they may later be required for long-term pacing systems. It is important that the threshold obtained is appropriate to the electrode used. For the U.S.C.I. electrodes we insist on less than 1 volt at 2 milliseconds. We deliver an output voltage of twice threshold, & as the underlying lesion lowers the ventricular fibrillation threshold in many of these patients.

Corticosteroids in Asthma

Sir,—The excellent report by Dr. K. Maunsell and others (16 March, p. 661) confirms that steroids can be used as a long-term measure in the management of asthma, and that side-effects are related to the average dose of steroids used, rather than to the length of treatment. No mention is made, however, of whether other bronchodilator agents are used in conjunction with the prednisolone. It is my routine practice to give conventional bronchodilator drugs (usually ephedrine or orciprenaline) in a regular oral dosage in addition to the steroids, as I believe this reduces the dose of prednisolone required, and so lessens the likelihood of side-effects.

I have recently been using disodium cromoglicate for prophylactic purposes, and although the number of patients on whom the effect of prednisolone was reversed by disodium cromoglicate was small I am satisfied that most of them have been able to reduce their dose of prednisolone.1 I am, etc.,

Cambridge.

M. J. GREENBERG.

References


Dental Anaesthesia

Sir,—The Ministry of Health’s report on dental anaesthesia has the seal of authority. It has been widely circulated and publicized; there has been considerable press coverage and a substantial national press; and now in your editorial comment (24 February, p. 462) it is given an additional boost. Before being finally accepted as gospel it should be looked at critically.

According to the argument put forward in the report, dental anaesthesia has never been so dangerous, and yet the facts show that dental anaesthesia has never been so safe. In 1952 there were 24 million administrations in England and Wales.1 Now there are 2 million a year (report, page 19). But the mortality has fallen dramatically. In the years 1949–51 there were 11 deaths, whereas in the years 1959–61 there were none.3 The trend is shown by the report which gives the death rate in dental anaesthesia as 1 in 1,000,000 compared with 1 in 7,000,000 in medical anaesthesia.8


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the rat uterus, but when given after isoprenaline the action is reversed and is abolished by adrenaline. It may be supposed that in a severe attack of asthma the patient is alarmed and is secreting adrenaline which would normally relax the bronchioles; if an excess of adrenaline is administered, the effect of adrenaline will be reversed, leading to bronchoconstriction, and making death more likely. The prolonged use of isoprenaline might therefore defeat its own ends. It is not known what effects adrenaline has on the action of catecholamines. Research on all these questions is urgently needed.—I am, etc.,

ANNE TOTHILL.

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