Abstracts

delivery and after six hours of uneventful continuous caudal analgesia. It is doubtful that this method of analgesia was the cause of this death.” 9 references.

J. C. M. C.


“When a new compound has required testing for activity as a local anaesthetic, the methods hitherto available have been rough methods allowing an approximate measure of potency to be obtained provided that a good deal of care was taken. . . . The usual aim has been to find the lowest concentration which produced anaesthesia. The practical difficulty of finding this threshold concentration is greater than might be supposed, and a recent proposal made by Chance and Lobstein (1944) has proved to be an important step forward. They applied a given solution to the cornea of the guinea-pig at a certain time, and at regular intervals they tested the corneal reflex by touching the cornea with a light object, not once, but six times, and determined what proportion of the six stimuli were effective. It might be expected that the cornea would either be anaesthetized fully or not anaesthetized at all. This is not so. Anaesthesia may, of course, be complete, and then all stimuli fail. There is, however, a stage in which the anaesthesia begins to diminish, and from that point until it has completely disappeared the proportion of stimuli which evoke a response slowly increases. By testing a compound on the eyes of a group of guinea-pigs and determining for each concentration the mean rate of disappearance of anaesthesia, it is possible to make an accurate comparison between one compound and a known substance like cocaine which is chosen as a standard. . . . The principle of the method of Chance and Lobstein has now been applied by Bülbbring and Wajda . . . to the intracutaneous-wheat test in guinea-pigs proposed by McIntyre and Sievers. . . . In addition to nupercaine, cocaine, β-ecuaine and procaine were tested in this way. . . . For each of these substances the relation of the degree of anaesthesia to log concentration was found to be linear, and the straight lines for nupercaine, β-ecuaine and cocaine were approximately parallel. The line for cocaine was steeper. The fact that linear relations were found for each substance indicates that the method is a good one and gives a means of obtaining a quantitative comparison of two substances for local anaesthetic activity on sensory nerve endings in the skin of the guinea-pig. In comparing two substances it is obviously important that the comparison should be made simultaneously, injecting both substances into each guinea-pig. It would be unwise to test the two compounds at different times, or to test them on different guinea-pigs. The fact that cocaine gave a line . . . differing in slope from the lines given by the other substances was thought likely to be due to the vasoconstrictor action which cocaine possesses. There was at least no other known property of cocaine to which the difference might be attributed. A direct comparison was therefore made between a solution of cocaine and a solution of procaine to which adrenaline was added in a concentration of 1 in 100,000. The result of this comparison . . . shows the line for procaine plus adrenaline to be parallel to the line for cocaine, and in the presence of adrenaline lower concentrations of procaine become effective. . . . Sollman (1918) described a method of estimating local anaesthetic action in frogs in which the solution was applied to the sciatic plexus. . . .
"Bülbring and Wajda have modified this test. . . . The results of examining three concentrations of cocaine by this method [show that] . . . when the concentration of 0.05% was used, the mean time for anaesthesia to 0.2 N HCl was 20.25 minutes; when the concentration was 0.1%, the mean time was 9.7 minutes; finally, when the concentration was 0.2%, the mean time was 4.5 minutes. A comparison of the results in different frogs treated with the same concentration shows that there is much variation among the frogs. . . . When the figures for the mean time are plotted as ordinates against the logarithms of the concentrations used, a linear relation was again observed. . . . Once again the lines for nupercane, β- eucaine and procaine were more nearly parallel to one another than they were to the line for cocaine; it is difficult to account for the difference in slope in this test by the vasoconstrictor action of cocaine; a vasoconstrictor effect could scarcely come into play. To what the difference is due is not known. . . . Since the slope of line relating log concentration to effect of cocaine differs from that of the other substances it would probably be better to use procaine hydrochloride as a standard of comparison." 5 references.

J. C. M. C.


"Dr. D. G. Perrett, of Newcastle, first called my attention to the fact that the Boyle Davis gag can be utilized for local anaesthesia. . . . Any local anaesthetic suitable for application to a mucosal surface may be used as a spray. It is applied from a spray having a swivel nozzle, with the patient sitting up. . . . The patient is placed in the recumbent position. . . . I use 15 to 20 millilitres of a 0.5% solution of 'Novocaín,' 10 minims to the ounce of a 1 in 1,000 solution of adrenaline hydrochloride being added. . . . I do not propose to discuss the relative merits of local and general anaesthesia for tonsilectomy. I shall say only this: ten years ago I had removed only a few tonsils under local anaesthesia, but now I try to persuade all adult patients to submit to this procedure."

J. C. M. C.


"I have set out to make a preliminary investigation of curare in respect of its use for anaesthetic purposes, for conditions of the nervous system where there is spasticity and for involuntary movements. . . . In the cases in which I have used curare to obtain relaxation I have relied entirely on this drug for the relaxation and have only employed gas and oxygen to render the patient analgesic with no volatile anaesthetic as an adjuvant. . . .

"After my short improved experience of curare I am sure that with more experience and technique in order to prolong the effects of the drug in spastic cases there is a very important advance in therapeutics."

J. C. M. C.


"At the present time there are two preparations of purified curare on the market and unfortunately they differ in potency. 'Intocostrin' is put up in bottles of 5 cm. and 10 cm. and consists of a sterile solution of 20 mg. of 'curare extract' per cm. with 0.5%