COMMENTS ON THE USE OF PERCAINE AS A SPINAL ANÆSTHETIC.

By E. F. JOHNSON, M.B. (Lond.).

Anæsthetist to St. George's Hospital.

I HAVE been administering percaine as a spinal anaesthetic for the past twelve months, employing the method originated by Dr. Howard Jones and described by him, and have formed the following impressions of its use.

The advantages claimed for it are:—

(a) The complete degree of anaesthesia.
(b) The admirable muscular relaxation obtained.
(c) The avoidance of primary surgical shock, due presumably to the blocking of afferent impulses at the spinal nerve roots.
(d) The slight and transient fall in blood pressure which follows its administration.
(e) The absence of untoward after-effects.

With regard to these claims it has been my experience that if a suitable dosage is employed, complete abdominal anaesthesia can be obtained except in operations involving traction on the stomach and gall bladder. Pulling on these organs appears apt to set up vagal reflexes which cause the conscious patient a sensation of nausea and efforts at retching, which disappear under gas and oxygen anaesthesia, or as soon as traction is stopped, as for instance when the clamps in a gastroenterostomy have been adjusted. Apart from this, any surgical procedure is possible without the patient experiencing any sensation.

(b) If the anaesthetic has been correctly administered, muscular relaxation is complete.

(c) and (d) Apart from initial fall in blood pressure, which in only one case exceeded 20 mm. in the systolic pressure, and which only lasts for from 15 to 20 minutes,
shock is never observed, and it is the rule for patients to leave the operating theatre after operations such as Wertheim's hysterectomy or arthrodesis of the hip, fasting one hour or more, with a pulse of 70 to 80 and the systolic blood pressure within 10 mm. of its original figure.

(e) In a series of 60 cases, only two have suffered from "spinal headache," one lasting two to three days and one 36 hours. The occurrence of these headaches would seem to be minimised by the use of a small bore (1.1 mm.) spinal needle, thereby reducing the liability of subsequent leakage of the cerebro-spinal fluid through the hole pierced in the spinal theca. No case in the series suffered from any form of subsequent paralysis.

In the earlier cases 1/1,500 solution of ordinary percaine was used, and one complete and one partial failure were observed. These appeared to be due to the extreme sensitivity of the very dilute solution of percaine to the presence of any trace of alkali, for immediately the precaution was taken to wash out the syringe and needle used in faintly acidulated sterile water no more failures occurred. For the past eight months the same strength solution of "buffered" percaine has been used and this does not appear to be unduly sensitive to the presence of alkali, so the above precaution can be omitted.

In the earlier cases, 0.5 to 1.5 c.c. of ephedrine HCl were administered intramuscularly at the commencement of the anaesthetic, but this appeared to be unnecessary, and in one or two cases the surgeon complained of capillary oozing which may have been attributable to the ephedrine. It is now not given unless the general condition of the patient makes it desirable.

In the more recent cases it has been usual either to give a preliminary injection of morphine gr. 1/2 or to combine gas and oxygen anaesthesia with the spinal anaesthetic, as without either of these the patients are usually extremely conscious of all that is going on around them, and it is obviously desirable to allay their mental apprehensions and dislike of the bodily exposure involved in most operations—especially such as perineorraphies, etc.
In conclusion, spinal percaine appears to be particularly indicated in operations below the diaphragm where some general complication such as lung trouble or diabetes exists, or where the operation may be expected to be lengthy or productive of considerable shock.