

In view of the possible ethical if not medico-legal difficulties, most general practitioners avoid procedures of this kind and, when such treatment seems indicated, prefer to send their patients to a gynaecologist or to an infertility clinic. If the general practitioner in this case decides to proceed with artificial insemination he would be well advised to: (a) Obtain from the patient and her husband a document signed by both, giving consent to the operation. This document should clearly state the nature of the operation, the reasons for it, and the origin of the semen to be used. (b) Only carry out the operation in the presence of a third party, preferably a nurse. After the operation the nurse should be asked to sign the document of consent. (c) Keep a careful record of the details of the procedure.

Painless Local Analgesia

Q.—*Is there any completely painless way of administering a local analgesic? I need such a method to allow the insertion of needle electrodes into children for electromyography. Is there not an instrument for giving subcutaneous injections that dispenses with the need for a needle?*

A.—A subcuticular skin weal can be raised quite painlessly. A syringe is fitted with a fine, short-bevel hypodermic needle. The flat of the bevel is placed against the skin, and while the local analgesic solution (which must be isotonic) is gently forced out through the needle the point is slid under the cuticular layer. A tiny white bleb appears without any pain. Through this bleb a heavier gauge needle can be passed painlessly. Confirmation that the method is painless can be obtained by doing it on one's own arm. The success of this method in children will naturally depend on how well the administrator can prevent any fear or strain on the part of his young patient.

The instrument for giving subcutaneous injections without a needle is the "hypo-spray" described by R. A. Hingson.¹ The solution to be injected was contained in a small round-nosed metal ampoule with a tiny orifice of about 75 microns diameter. A powerful spring inside the instrument generated a pressure sufficient to force the liquid in the ampoule through the tiny orifice and through the skin into the subcutaneous tissues. The injection, though very nearly, was not always entirely painless. In addition, unless the instrument was held absolutely still the tiny puncture in the skin might be converted into a slit. So far as is known, neither the instrument nor the necessary ampoules were ever made available on the British market.

REFERENCE

- ¹ Hingson, R. A., *Anesthesiology*, 1949, 10, 66.

Urinary 17-ketosteroids

Q.—*What is the normal range for urinary 17-ketosteroids in men and women, respectively? In what clinical conditions does the information gained from this estimation justify its use?*

A.—The normal range for 17-ketosteroids in the urine differs in the two sexes, owing to their being derived partly from adrenal cortical sources and partly from testosterone in the testes. Slight differences in the normal range depend upon differences in the techniques used for analysis. The most generally used technique gives values for men of 8–23 (average 14.5) mg. daily and for women 5–18 (9.5) mg. daily.

The commonest causes of elevation of these values are certain adrenal cortical tumours and the prepubertal virilizing syndrome associated with hyperplasia of the adrenal cortex. Low values may be obtained in a variety of non-specific chronic disease processes and in myxoedema and anorexia nervosa. Particularly low levels are found in women with Addison's disease, and to a less extent in men because of the presence of functioning testes. In well-established hypopituitarism a value of only 1 or 2 mg. per day is often found in either sex. The subject has been recently discussed in *Clinical Pathology in General Practice* (1955; B.M.A., London).

NOTES AND COMMENTS

Dental Caries During Pregnancy and Lactation.—Dr. B. J. BOUCHÉ (London, S.W.19) writes: Your expert's answer to the question on dental caries during pregnancy and lactation ("Any Questions?" January 26, p. 239) does not appear to be complete or comprehensive. The questioner asks what "dietary supplements" are advised during pregnancy and lactation to prevent dental caries in the ordinary case, but your expert talks only about supplementing the intake of minerals, which he states is unlikely to prevent caries of the mother's teeth. Is it not true to say that the enamel ameloblasts and dentine odontoblasts take up calcium and phosphorus from the maternal blood to make enamel or dentine in the developing foetus and for this vitamins D, A, and C are all necessary? Can it not be imagined that if antenatal care does not provide these items adequately the result may be disastrous for both mother and baby? In addition to pregnancy and lactation, would it not be reasonable to add prolonged illness also when such a need must be met?

OUR EXPERT replies: Dr. Bouché is quite correct in thinking that, if an antenatal diet does not provide adequate amounts of calcium, phosphorus, and vitamins A, D, and C, the result may be disastrous for both mother and baby. The teeth, however, would be one of the structures least likely to be affected in such a disaster. It would also be correct to add vitamins A, D, and C to the list of dietary supplements which have been tested for power to protect teeth against caries and found ineffective in adults. The only dietary agent to date which has been clearly shown to protect against caries is the fluoride ion, and it would have little effect on the mother, as its protection appears to be conferred during the period when the teeth are calcifying.

Local factors seem to be of more importance than systemic ones in causing caries. The best advice that can be given to prevent dental caries in the ordinary case is to pay regular attention to cleaning the teeth and to have the dental practitioner attend to any particular places in the mouth where food debris might stagnate. This need for oral hygiene is particularly important in pregnancy in view of the possibility of pregnancy gingivitis causing tender gums and so discouraging the use of the toothbrush. It is also of great importance in illnesses where the natural cleansing action of saliva may be lost owing to impaired function of the salivary glands.

Flowers in the Sickroom.—Dr. GEORGE GRAHAM (London, W.1) writes: Your expert has given the reasons for thinking that it is unnecessary to remove flowers from the sickroom because they excrete carbon dioxide at night ("Any Questions?" January 26, p. 239). But he does not offer any explanation for this widespread belief which few nurses would dare to brave. Many years ago I had a patient with asthma who had to be discharged from the ward because he said that flowers caused his attacks. I suspect that this happened to someone many, many years ago, and that the authorities at the time did not know that the pollen of some flowers caused attacks of asthma in some patients. They knew that flowers gave off carbon dioxide at night which they thought, very foolishly, was harmful, and banned all flowers from all sickrooms irrespective of whether the patient had asthma or not. This belief causes much unnecessary work for the nurses who have to remove the flowers, which in some cases are very numerous, to draughty corridors and bathrooms. This change of temperature and the knocking about which the flowers and plants receive may damage them. I hope your expert's authoritative answer will stop this practice, but I fear the belief is too ingrained in nurses and all nursing authorities to be stopped by any explanation.

Correction.—In the letter on methyltestosterone therapy by Drs. S. Olesky and D. S. Munro (*Journal*, February 16, p. 404) the word "linguets" should have been in quotation marks to indicate that it is a registered trade mark, used by Ciba Laboratories Ltd.

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