

of the disease at a site which has been injured or exposed to cold, and therefore, although not to be regarded as the cause of the disease itself, injury may determine the site of a local lesion of thromboangiitis obliterans.

#### Autonomic Ganglion Block during Anaesthesia

**Q.**—(1) *What are the advantages of causing block at the autonomic ganglia during anaesthesia?* (2) *How does dimethyl tubocurarine compare with D-tubocurarine in this respect, and which is the best to use?*

**A.**—(1) There is no conclusive evidence that autonomic ganglion block of the order produced by D-tubocurarine and its derivatives has any effect on the reactions of patients to surgical trauma. Their satisfactory condition after major operations under very light anaesthesia has been attributed to such a block. This may also be due to the smaller amounts of anaesthetic agents used and, in abdominal operations, to reduced surgical trauma resulting from the much better access to the site of operation with better muscle relaxation. D-Tubocurarine can produce blood-pressure fall from autonomic ganglion block in animals; this is not usually found in human beings.

(2) Dimethyl tubocurarine is said to cause less complete block of autonomic ganglia than does D-tubocurarine. In clinical use it is hardly possible to distinguish between the effects of the two, in equipotent doses, and the results are equally satisfactory.

#### Staphylococcal Mastitis in Cows and Food-poisoning In Man

**Q.**—*Chronic staphylococcal mastitis is not uncommon among dairy cows in this country and is less easily treated than the commoner streptococcal mastitis. Is it considered to be a likely cause of food-poisoning in man? If so, would pasteurization afford protection?*

**A.**—While it is true that *Staphylococcus aureus* is frequently present in raw milk, all the evidence suggests that staphylococcal food-poisoning from milk is rare. One possible explanation of this may be that, if raw milk is allowed to stand, the staphylococci are unable to compete with other bacteria multiplying in it, and are overgrown or even killed off. Pasteurization of milk soon after collection, and before any staphylococci have had time to multiply and produce enterotoxin, will afford protection.

#### Fat-soluble Vitamins

**Q.**—(1) *If a child will not take fish oils in any form, what alternative ways are there of giving it fat-soluble vitamins?* (2) *What doses are advised in infants and young children?*

**A.**—(1) There are available for those who wish to prescribe them concentrated preparations of vitamins A, D, E, and K. Vitamin D can be obtained in its synthetic form—calciferol—and vitamin A as a concentrated solution prepared from saponified fish-liver oils.

(2) The standard preparation is liq. vitamin. A et D conc. B.P., of which 1 minim (0.06 ml.) contains about 250 i.u. of vitamin D and 2,500 i.u. of vitamin A. It can be given as drops on the tongue of a breast-fed infant, or added to the milk for a bottle-fed baby, or mixed in fruit juice. There are several proprietary preparations of similar composition.

A suitable routine for the prevention of rickets—in the absence of abundant sunshine—is to give a normal infant 250 i.u. of vitamin D daily, beginning at the end of the first month, increasing the dose to 500 i.u. at three months. Premature and bottle-fed babies may require a larger dose. There is a difference of opinion among paediatricians on whether the dose should be further raised at 6 months to 750 or even 1,000 i.u. daily. It is desirable that vitamin D should continue to be given for at least the first two years of life.

The prophylactic dose of vitamin A is less easy to define, but the standard B.P. liquor mentioned above will meet all

possible needs if the dose of the preparation given is sufficient to provide enough vitamin D.

Newborn infants suffering from hypoproteinaemia and consequent tendency to bleed require fat-soluble vitamin K. A single intramuscular injection of inject. menaphthone B.P., 5 mg. in 1 ml. oily solution, is usually all that is required. There is no evidence that infants or young children need fat-soluble vitamin E.

#### Signs of Death after Drowning and Electrocutation

**Q.**—*What signs of death must be present before attempts at resuscitation are abandoned in a case of drowning or electrocution?*

**A.**—The two situations are not quite comparable and the procedures must differ. In electrocution, if commenced immediately, artificial respiration should be continued for four hours even if signs of life cannot be demonstrated; recovery has been known to occur after a considerable lapse of time. If possible the person should be moved to a hospital where an "iron lung" is available. In drowning, artificial respiration should be continued for 25 to 30 minutes, and then, if there is no sign of life as shown by auscultation over a period of several minutes, it may be stopped.

#### Barbiturates and Blood Coagulation

**Q.**—*Is there any evidence that barbiturates promote intravascular clotting?*

**A.**—Evidence about the effect of barbiturates on the coagulation of the blood is conflicting, and the general conclusion is that the effect, if any, is very small. P. Rolland and R. Vieillefosse (*J. Physiol., Paris*, 1941, **38**, 338) found no significant variation in the bleeding time or the coagulation time of six rabbits given cyclopentenyl allyl barbituric acid, or of two rabbits given hexobarbitone. In a dog given repeated doses, the coagulation time decreased slightly. M. Mollari, W. A. Randall, and T. Koppányi (*J. Immunol.*, 1937, **32**, 35) found that neither barbitone nor phenobarbitone produced any change in coagulability provided there was no alkalosis. S. Levy and L. Conroy (*Anesthesiology*, 1946, **7**, 276) estimated the prothrombin time before and after pre-operative treatment with pentobarbitone, 3 gr. (0.2 g.) at night and on the following morning; the prothrombin time was increased and the clotting power reduced slightly (to 87% of normal). M. M. Ellis and O. W. Barlow (*J. Pharmacol.*, 1924, **24**, 259) found that in pigeons and cats the coagulation time was shortened during the first few hours of barbitone anaesthesia and returned to normal between 20 and 48 hours. The change went parallel to the blood sugar values, and it seemed that it might be due to an output of adrenaline.

## NOTES AND COMMENTS

**Sodium-containing Barbiturates in Eclampsia.**—It has been pointed out that the statement ("Any Questions?" May 17, p. 1091) that soluble phenobarbitone contains no sodium is incorrect. In fact all the soluble barbiturate preparations contain sodium, but this does not create a real problem in the treatment of eclampsia: the amount of sodium in these preparations is very small and the duration of the need for parenteral therapy is also short.

**Correction.**—In the annotation "Responsiveness to Cortisone" (May 10, p. 1016) the chemical name of cortisone should have appeared as 11-dehydro-17-hydroxy-corticosterone.

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