# Any Questions?

*Correspondents should give their names and addresses (not for publication) and include all relevant details in their questions, which should be typed. We publish here a selection of those questions and answers which seem to be of general interest.*

## Focal Sepsis

**Q.**—*Opinion has now swung far away from focal sepsis as a frequent cause of ills elsewhere in the body. Can you please state in what general conditions focal sepsis is still believed to play a significant part? Is it, for instance, an aetiological factor in cholecystitis or hepatitis? Is it always wise to eliminate focal sepsis wherever and whenever found?*

**A.**—Focal sepsis is no longer considered to be the direct cause of any other disease, though it may make the attack more severe. It is responsible for general ill-health, and if severe the ill-health may be serious. Its effect is best shown in a disease like diabetes mellitus, where glycosuria may reappear and the insulin requirements increase if focal sepsis appears or becomes worse. Removal of the septic focus will, after a while, usually enable the dose of insulin to be reduced. In toxic goitre, septic foci in the tonsils will cause a great increase in the symptoms, pulse rate, and basal metabolic rate, and eradication of the foci will be followed by an improvement. The condition may be so severe, however, that it is safer to deal with the goitre either by thiouracil or by operation before the tonsils are removed. Various other diseases are made worse, but the evidence is not so clear as in these two diseases, where direct measurements are possible. It is impossible to prove that the general ill-health due to focal sepsis lowers the resistance of the body to other diseases and so enables them to develop, but it is an attractive hypothesis. It is considered unwise to permit definite focal sepsis to continue untreated. There is no evidence that it acually causes a cholecystitis or hepatitis.

## "Blown" Tins

**Q.**—*What is the right policy to adopt towards a "blown" tin of food? Does a tropical climate affect the decision on what should be done? I have opened many of these tins and the contents appear perfect, and on several occasions I have eaten from them without ill-effect. If such tins are all destroyed the financial loss is considerable. Is there any test which can be used to decide whether the contents of a blown tin are safe to eat? Alternatively, will any treatment of the contents make them safe?*

**A.**—A "blown" can results from the production of gas, which converts the normal slight vacuum in a properly processed can into a positive pressure. The gas may be of chemical origin, as when hydrogen is produced by the action of acid fruits on the metal of the can, or of bacterial origin. Many of the bacteria responsible for spoilage belong to the thermophilic group, multiplying best at temperatures of 50 to 60° C. Cans containing these organisms often cause no trouble in cold climates, but become blown when exposed to tropical temperature. As there is no test short of a full bacteriological examination to decide what the cause of blowing is in any particular can, the only administrative decision that can be taken is to condemn the food. The cans, or a proportion of them, should be returned to the manufacturers so that they can make the necessary alterations in processing to prevent recurrence of the trouble. In this they can appeal for help to the British Food Manufacturing Industries Research Association.

Blown cans of food may often be eaten with impunity, but others are dangerous, and there is no simple method of rendering the contents safe. Whatever risks the individual may care to take, batches of blown cans intended for general consumption must be condemned.

## Barbiturates and Autonomic Activity

**Q.**—*What is the action of barbiturates on the autonomic nervous system?*

**A.**—The barbiturates have a powerful depressant action on the hypothalamic centres controlling autonomic activity. They diminish the motor, sympathetic, and emotional responses resulting from electric stimulation of the hypothalamus in cats, and they selectively depress the brain stem, and therefore the vasomotor and respiratory centres, in doses which do not exert a full effect on the cortex. The evidence that the barbiturates exert a peripheral effect on the autonomic nervous system is less satisfactory. The recorded effects vary with individual members of the group and with the species of animal studied. In general, full anaesthetic doses have to be administered to elicit these effects, which include diminished excitability of the vagus supply to the heart, reversal of the effect of the vagus on the stomach (amylobarbitone), and reversal of the effect of the sympathetic on the stomach (phenobarbitone). The proprioceptive mechanisms (carotid sinus) regulating vasomotor tone are depressed. The laryngeal spasm which may follow intravenous thiopentone is probably due to stimulation of the peripheral vagal endings.

In clinical practice when barbiturates are used in the treatment of psychosomatic disorders it is the effect on the hypothalamus which it is hoped to elicit. There is little evidence of any significant peripheral effect on the gastrointestinal tract or uterus unless the patient is rendered almost unconscious.

## Care of Mental Defectives

**Q.**—*What public provision is made for the institutional care and training of mental defectives? How is admission secured?*

**A.**—Institutions for mental defectives are hospitals within the meaning of the National Health Service Act and the responsibility for providing them rests with regional hospital boards. For admission it is usually necessary in the first instance to apply to the medical officer of health of the county or county borough in which the patient lives in order that he may be "ascertained" under the Mental Deficiency Act, 1913, and his name sent up to the regional board. But all regional boards have long waiting-lists for vacancies in their hospitals for mental defectives, and only the most urgent cases can be considered. For more detailed information reference should be made to a pamphlet (price 9d.) published by the National Association for Mental Health, 39, Queen Anne Street, W.1, under the title "Notes on Legislation for Mental Defectives."

## "De Nol"

**Q.**—*What are the principles of the "De Nol" treatment for peptic ulcer? Are there any reasons for believing it to be more effective than the standard treatment with diet and alkalis?*

**A.**—The De Nol treatment for peptic ulcer has been evolved in South Africa. Patients treated by the method are given a full diet and a graduated series of medicines. The medicines are compounded of numerous remedies (for example, liquor bismuthi concentratus, acidum hydrocyanicum dilutum, tinctura belladonnae, etc.) and one component is changed with each change of medicine. In addition the medicines contain an unspecified amount of the "Denolate radicle" which is "synthesized in the laboratory by a process of controlled symbiotic fermentation." The nature of this compound has, so far, not been disclosed. It is claimed that the medicines containing the "denolate radicle" combine with the ulcer surface to form a thick and tenacious mucilaginous cover which protects it against further digestion while healing takes place underneath, and that their ability to do this is partly owing to the fact that they are "subjected to the appropriate degree of electro-static tension." However, we know of no published experimental evidence to support such a remarkable claim.

The makers of De Nol claim excellent therapeutic results from their product. However, a large proportion of peptic-ulcer patients put on any non-injurious regime must be expected to do well, as the natural course of the disease is for remission to occur. In addition, evidence is now becoming available that a full diet is compatible with normal healing. It may even be—though this is not proved—that over-restricted dieting hinders healing in some patients, and a change to a full diet is always worth trying. The expense of the De Nol treatment (about £14 a course) may induce in some patients a mental state receptive to a suggestion that the disease is being cured. There is, however, no reason to suppose that this cannot be done more cheaply and more effectively by standard therapy.

### Shot-gun Accident

**Q.**—*A patient has been peppered by about 40 pellets from a shot-gun. What are the chances of lead poisoning or of a pellet lodging in an end-artery and causing serious complications? What treatment is advised? The pellets are widely scattered in the body.*

**A.**—The risk of lead poisoning is negligible, and the chance of an end-artery becoming blocked almost equally remote. The only treatment is removal of the pellets where practicable, and *x*-ray examination to help exclude internal injury or suggest possible later complications. There is, of course, always the risk of bacteria being introduced by the pellets, and prophylaxis against tetanus should be considered.

### Onset of Aplastic Anaemia after Chloramphenicol

**Q.**—*If aplastic anaemia is going to develop after treatment with a drug such as chloramphenicol, when will it develop? Does it ever appear after treatment has ceased? If so, when may a patient be regarded as safe from this complication after a course of a predisposing drug?*

**A.**—The following comments are based on an analysis of about 20 published cases; not enough is known to allow a dogmatic answer.

Aplastic anaemia may occur during or after the completion of a course of chloramphenicol. The commonest sequence is (1) sensitizing course of chloramphenicol; (2) interval of days, weeks, or months; (3) precipitating course of chloramphenicol. Sensitization and precipitation may each require no more than 4 capsules (200 mg.) chloramphenicol. Treatment with chloramphenicol continued for a month or more may produce aplastic anaemia even though dosage is continuous. Aplastic anaemia does occur, though rarely, as a result of a single course of 18–20 capsules of 50 mg. given to a child. If aplastic anaemia does develop, the presenting symptoms are likely to be ready bruising, purpura, lassitude, and spontaneous bleeding; these normally occur within two months of the completion of the course, and even in the most insidious cases lassitude and tiredness become prominent within three months. When anaemia or thrombocytopenia do develop the prognosis is very bad: only one or two cases appear to have recovered.

Fortunately the complication is rare, occurring probably in no more than 1 case in 10,000 treated. On the one hand, therefore, one must not become too alarmed by the risk, but on the other it is essential that chloramphenicol be prescribed only when there is a clear indication for it, and for infections in which no other drug is active, such as typhoid fever. It would probably be wise to prescribe aureomycin for undulant fever rather than chloramphenicol, which has hitherto been the drug of choice. It is difficult to decide how justifiable is its routine use in pertussis; the writer's own view is that it should be used whenever there is a risk of death or serious complication—that is, in all children under the age of 1 year, and in any debilitated child or in one suffering from multiple infections. Its use in otherwise healthy children who are likely to recover without complications may be open to some criticism.

### The Ovaries and Breast Cancer

**Q.**—*Does castration affect the prognosis of cancer of the breast in women? Is there any justification for its use, in conjunction with radical surgery, either routinely or in selected cases of breast cancer?*

**A.**—The removal of the ovaries in cancer of the breast is never harmful so far as the malignant condition is concerned and is often helpful. If menstruation has not ceased it is a very useful thing to do, and after the climacteric it is still worth while because the ovaries are not completely inert after the change of life. There is evidence to show that suppression of ovarian function by *x*-ray treatment is not so valuable as surgical removal of the ovaries. In two types of case is ovariectomy specially indicated—the hopelessly inoperable and the case of recurrent disease after surgical amputation or radiation.

For some reason or other the practice of removing the ovaries in this condition has never become established here or in any other country, but probably it will become increasingly popular.

### High-flying Mosquitoes

**Q.**—*What effect has altitude on the viability of mosquitoes, with particular reference to their ability to survive in aeroplanes?*

**A.**—Altitude does not appear to affect the viability of mosquitoes in aeroplanes. In three personally conducted trials the results were as follows: (1) At 15,000 ft. (4,572 m.) in a non-pressurized aircraft 2,000 anopheline mosquitoes were taken from England to North Africa during the war in small cages; at the end of the journey all except five had survived. (2) At 10,000 ft. (3,048 m.) in a non-pressurized aircraft 2,000 anopheline mosquitoes were taken from England to West Africa in 1947. All except three survived the journey. (3) In a chamber evacuated to correspond with a height of 35,000 ft. (10,668 m.) all the mosquitoes survived for one hour.

## NOTES AND COMMENTS

**Sedatives for Babies.**—Dr. T. H. J. WILLIAMS (Eastleigh) writes: I personally have not found chloral hydrate a satisfactory sedative ("Any Questions?" October 18, p. 890). I have found it very difficult to persuade children to take what my daughter calls "burny medicine." The best are tablets of carbromal and bromvaletone or aspirin and calcium carbonate, a quarter to a whole tablet of either. These, of course, can be given with jam.

OUR EXPERT writes: There can, of course, be no doubt that your correspondent is correct in saying that chloral has an unpleasant taste. It certainly has. This can be got over to some extent by careful prescribing:

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| e.g. Syrup of chloral .. .. .. | 10 min. (0.6 ml.) |
| Liquid extract of liquorice .. | 2 min. (0.12 ml.) |
| Glycerin .. .. .. .. | 10 min. (0.6 ml.) |
| Water to .. .. .. .. | 60 min. (3.6 ml.) |
| Send 1 fl. oz. (28.4 ml.) | |

In such a mixture each 60 min. (3.6 ml.) contains nearly 2 gr. (0.13 g.) of chloral hydrate. I cannot help feeling, however, that the advantages of chloral as a hypnotic for children greatly outweigh the disadvantage of its disagreeable taste, which is slight when prescribed as above, and that it is more dependable and better tolerated than the urea hypnotics to which your correspondent refers. Chloral and acetylsalicylic acid cannot, of course, be compared. The former is a potent hypnotic, the latter an antipyretic-analgesic.

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