

could be argued that this is the most desirable policy, but it is seldom practicable—it involves far too large a number of single injections (and visits to the clinic).

In the particular case, however, of B.C.G. vaccination during a course of poliomyelitis injections it is probably advisable to space the B.C.G. at least a month away from any of the poliomyelitis inoculations. This is because B.C.G. vaccine is not so simple a prophylactic as, say, diphtheria toxoid: it is a living culture of bacilli, and it produces quite a distinct reaction. It is also a vaccine of which experience is still comparatively limited. In the same way as it is desirable to separate smallpox vaccination from other inoculations, B.C.G. vaccination should be timed, as it is usually convenient to do, in such a way as not to affect, or be affected by, any other antigenic stimuli.

#### Codeine Phosphate for Bowel Irritability

**Q.**—*In a case of persistent loose stools due to early diverticulitis, is the prolonged use of tab. codein. phos. ½ gr. daily in any way harmful?*

**A.**—There is no doubt that codeine phosphate is the best single drug for bowel irritability, and, given in small doses over quite long periods, it does not appear to be harmful. Bulk-regulators, such as methylcellulose ("celevac") or "i-so-gel," may sometimes reduce the need for it.

#### Disinfection with Ultra-violet Light

**Q.**—*Would exposure of woollen, silk, and nylon objects made by sanatorium patients to an ultra-violet lamp for one hour at a distance of three feet (0.9 m.) satisfactorily kill tubercle bacilli?*

**A.**—It is well known that exposure to ultra-violet light will kill *Mycobacterium tuberculosis*. It is, however, mainly used for sterilizing the atmosphere and dealing with bacilli carried in dust and droplets. It might well be ineffective for sterilizing objects made by patients because it would be impossible to ensure that every part of each object was exposed to the light. Similarly, bacilli in folds or interstices of material might remain untouched. The same considerations apply to disinfecting a room. Exposure to formalin vapour is a much safer method of disinfecting a room, and is also simple and cheap.

#### Suppressing Lactation with Hexoestrol

**Q.**—*What is the recommended dosage of intramuscular hexoestrol for suppression of lactation?*

**A.**—The dose of hexoestrol dipropionate for this purpose is 15 mg. intramuscularly; it might have to be repeated once or twice. Many doctors prefer to follow the injection by oral stilboestrol or ethinyloestradiol for five or six days, while others find these oral preparations sufficient without a priming injection. Stilboestrol is given 5 mg. four times daily for two days, then three times daily for two days, then twice daily for two days. Ethinyloestradiol is given similarly, each dose being 0.1 mg.

#### Inheritance of Angioneurotic Oedema

**Q.**—*What chances of being affected would there be for the children of a man who suffers from periodic attacks of angioneurotic oedema? His grandparents were unaffected; his father died of oedema of the glottis; his mother was unaffected. He has a brother unaffected and a sister mildly affected.*

**A.**—Angioneurotic oedema usually behaves, as in this family, as if due to a dominant mutant gene. The risks to this man's children are, therefore, 1 in 2. Numerous dominant pedigrees are on record, one of the earliest being that reported by Osler.<sup>1</sup>

#### REFERENCE

<sup>1</sup> Osler, W., *Amer. J. med. Sci.*, 1888, 95 n.s., 362.

## NOTES AND COMMENTS

**Ultrasonics in Physiotherapy.**—Dr. A. W. BAUER (London, W.1) writes: Enthusiasm for this treatment has not largely died down ("Any Questions?" November 7, 1959, p. 967). Work on the subject is going on in the U.S.A. and on the Continent, and I myself have written about it.<sup>1-6</sup> It is a little surprising that the writer of the answer on this subject omitted the main indications for ultrasonic therapy—that is, disorders of the circulation such as frostbite and Raynaud's disease, myalgias and neuralgias due to osteochondrosis, spondylosis and arthrosis of the spine. It is probable that ultrasonic energy applied to these latter diseases of the locomotor and skeletal system improves the nutrition of cartilaginous tissue and of disks. In any event, the good results achieved in these conditions by myself (and others) during the past nine years are very superior to those obtained by diathermy, short-wave, and other heat therapies. It is impossible to equate the thermal effect of ultrasonic energy with heat therapy in such a casual manner. The rise of temperature in the tissue can be minute in therapeutic doses of ultrasonic energy.<sup>4</sup> Moreover, ultrasonic energy possesses a selective effect on living tissue and a specific action on blood supply via the autonomous nervous system. In therapeutic doses, ultrasonics are not dangerous.

AN EXPERT writes: I think there are few workers in America and England who support the theory that ultrasonics has any special properties, either in its direct action or via the autonomic nervous system, which cannot be explained on the basis of selective tissue heating. This heating is selective by virtue of the physical properties of the ultrasonic beam and its effect is therefore somewhat different from that of short-wave diathermy. Disorders of the circulation would not feature high on my own list of indications for ultrasonic treatment. Improvement in spinal conditions has certainly not been proved to be due to improved nutrition of disks and cartilage, although this theory has been put forward in some quarters. In this country few of these conditions are treated by any form of thermotherapy alone, but rather in combination with traction, exercises, support, etc. Most authorities on ultrasonics agree that heating of the spine (or any bony structure) is more efficient in the case of ultrasonics than other forms of thermotherapy. If heating methods *per se* are compared as the sole method of treatment, as Dr. Bauer has done, I should expect the results to be superior in the case of ultrasonics. Although the first enthusiasm has worn off, there are over 500 generators in regular use in this country, although few specialists in physical medicine use them. Ultrasonic treatment is as safe as short-wave diathermy in the hands of qualified operators.

#### REFERENCES

<sup>1</sup> Bauer, A. W., *Brit. J. phys. Med.*, 1951, 14, 145.

<sup>2</sup> — *ibid.*, 1952, 15, 1.

<sup>3</sup> — *ibid.*, 1953, 16, 199.

<sup>4</sup> — *ibid.*, 1954, 17, 97.

<sup>5</sup> — *ibid.*, 1957, 20, 151.

<sup>6</sup> — in *British Encyclopaedia of Medical Practice*, 1952, interim supplement 117.

**Correction.**—The date of Dr. R. M. Stewart's paper in *J. Neurol. Psychopath.*, mentioned in the answer to a question on the Morgagni-Stewart-Morel syndrome ("Any Questions?" February 6, p. 441), was wrongly printed as 1938. It should have read 1928.

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