Another point is that I have followed up a number of patients who have suffered from non-pulmonary tuberculosis and who later married, and have found that pregnancies were unusual among them. This difference between patients with phthisis and patients with other forms of tuberculosis offers an interesting commentary on the pathogenesis of the disease.—I am, etc.,

Black Notley, Essex.

M. C. WILKINSON.

A Method of Abdominal Palpation

SIR,—The method of abdominal palpation described by Dr. E. W. Price (Nov. 1, 1947, p. 703) is, no doubt, almost the inevitable one when there is no table or chair available and when a number of patients are to be examined. But at a crowded out-patients of an Indian mofussil dispensary, where just a stool and a chair can be improvised, I have found a modification of the method more useful. The patient is seated on a stool on the examiner's right side, facing him and the light. The abdominal palpation is done in the same way as described by Dr. Price, with the patient bending forward. The sitting position of the patient is superior to the standing one for abdominal palpation, as it ensures a more complete relaxation of the abdominal muscles, because the thighs are flexed at right angles to the trunk.—I am, etc.,

Poonja City, India.

P. L. DESHMUKH.

Prickly Heat: A Simple Remedy

SIR,—Recent references in the *Journal* to prickly heat (Nov. 15, 1947, p. 779; Dec. 20, 1947, p. 1012) make me wonder once again how many of those who interest themselves in this complaint have tried treating it with perchloride of mercury lotion. If a solution of perchloride of mercury in water, 1 in 500, is dabbed twice daily over the affected area and allowed to dry on the skin, the trouble is finished, in my experience, within two or three days, and further occasional applications prevent its return. This simple treatment was told me many years ago by a colleague in the Colonial Medical Service: I have never seen it mentioned in print, and have never known it fail in practice.—I am, etc.,

Nairobi, Kenya.

C. J. WILSON.

Relief from Pain in Obstetrics

SIR,—May I, as a woman practitioner, support Dr. John Elam's timely plea (Dec. 27, 1947, p. 1055) for the relief of pain in obstetrics? I have just returned from a most heartening visit to a maternity home in the South of England where "trilene" and air, and gas and air, are available and efficiently administered to all women in labour who desire anaesthesia. What impressed me, however, was not the number of women who made use of this opportunity, but the far greater number who enjoyed—literally enjoyed—bearing their babies without any anaesthetic, drug, or hypnosis.

If anaesthesia is the only way whereby the pain in labour can be relieved, by all means let us have adequate facilities for its effective administration. But if the pain of labour can not merely be relieved but virtually prevented by perfectly simple, straightforward physiological methods, why not employ these, rather than in ignorance allow a "normal" labour to progress in such a manner that anaesthesia, with its accompanying dangers (however small), becomes necessary?

Having read G. Dick Read's *Revelation of Childbirth*, and taken the opportunity of verifying with my own eyes the practical results of the application of his theories, I am convinced beyond any shadow of doubt that the answer to the "scandal of the 'woman in pain'" lies, not in the reduction of pain "to a minimum" by anaesthesia, as Dr. Elam humanely suggests, but in its prevention by education. That such a revolution in the conduct of labour is possible there can be no doubt in the minds of those of us who have been privileged to experience over and over again the peacefulness of a really normal labour, and witness the healthy joy of a mother when, after such a labour, she reaps her reward in full consciousness of her achievement.

Doctors and midwives in many parts of the country to-day are practising, or learning to practise, the methods whereby such results are made possible. But until the principles and

practice of Dr. Dick Read's great work become part of the curriculum in *all* medical schools and midwifery training centres instead of, as at present, in an isolated and enlightened few, there will be many who, with me, deplore the grave and tragic injustice that is now being done to the mothers of this country and to humanity in general. For what is callousness, or indifference, to extreme suffering but a natural protective reaction towards the acceptance of its inevitability?—I am, etc.,

York.

MAHLO J. ELLIS.

Asthma and the Inhaler

SIR,—Dr. James Kay (Dec. 20, 1947, p. 1011) describes the effectiveness of an inhaler in relieving an attack of bronchial asthma. It is true that the method is simple to use and rapid in its effect, and this makes it particularly important that the contraindications to its employment should be recognized. The fluids employed in asthma inhalers usually consist of solutions of vasoconstrictor and antispasmodic drugs such as adrenaline, pituitary extracts, atropine, and papaverine, and the effect of these vaporized solutions on the congested bronchial mucous membrane is to produce a rapid vasoconstriction and paralysis of the cilia. The asthma is relieved by the shrinking of the previously swollen bronchial mucosa, and provided the inhalation is not repeated day after day no harm results. But if an inhaler is used several times daily for weeks or perhaps months at a time the cilia of the bronchial tree become destroyed and the bronchial mucosa becomes thickened. The result of this is that expectoration becomes more difficult, shortness of breath on exertion more pronounced, and the attacks of dyspnoea recur more frequently. These symptoms do not occur as a result of repeated adrenaline injections.

In general the higher the adrenaline concentration in the inhalant solution the more rapid is the relief obtained and the quicker is the bronchial mucosa damaged. There is also a risk of adrenaline poisoning when a strength of 1 in 100 is repeatedly inhaled (*Journal*, 1946, 1, 671), and I reported such a case (*Journal*, 1946, 1, 864). Ephedrine is less harmful as an inhalant than is adrenaline, and the suggested prescription of 1% cocaine and 1% ephedrine in 4% glucose saline (*Journal*, 1946, 1, 671) is preferable to the inhalant solutions usually employed.

It may sometimes be necessary to prescribe an inhaler for patients whose attacks are so severe that relief is not obtained by the usual oral remedies, and when, in addition, adrenaline injections are not practicable; but these patients must be warned of the risks of continued use.

Rhinologists know that spraying the nose with adrenaline produces rapid temporary relief to nasal obstruction by shrinking the nasal mucosa, and that this relief is followed by increasing obstruction. No rhinologist therefore would prescribe an adrenaline nasal spray for constant use. The employment of an inhaler is equally undesirable in chronic asthma.—I am, etc.,

London, W.1.

CLEMENT FRANCIS.

Foreign Body in the Vagina

SIR,—Apropos the letter from Dr. G. J. Grainger (Dec. 20, 1947, p. 1011) I can quote a case which I think is worthy of a place alongside the one he describes. I had been attending an old lady of over 80 for a considerable time, when, in November, 1942, she began to complain of a feeling that her insides were falling out. When I came to examine her I found that the perineum simply did not exist. On making a vaginal examination my finger encountered a foreign body which on withdrawal proved to be a dried-up twisted old ring pessary. There were no ulceration and no bleeding. On going into the history more thoroughly the patient was very vague but maintained against all attempts to dissuade her that the ring must have been *in situ* for 41 years.

Perhaps the most interesting feature of this case lies in the subsequent history. I continued to see her at regular monthly intervals. Her only complaint was of dizziness due to a raised blood pressure. In February, 1946, she began to complain of abdominal discomfort accompanied by attacks of diarrhoea. On examination I found her belly to be distended. A rectal examination revealed a hard mass invading the lumen of the

rectum about 3 in. (7.6 cm.) from the anal orifice. This was producing almost complete obstruction. Operation was firmly refused and she died on March 17, 1946. It is tempting to relate the final condition to the ring episode. Unfortunately no post-mortem examination was allowed, so no pathological evidence exists. Certainly I had at the time no doubt that clinically the growth was a carcinoma.—I am, etc.,

Bridlington, Yorks.

C. J. GORDON TAYLOR.

SIR,—I was interested to read (Dec. 20, 1947, p. 1011) about Dr. G. J. Grainger's finding a bone nozzle in the vagina. While I agree that it was remarkable that it should be impacted in the pessary, I do not feel that it should be expected to cause any more symptoms than the pessary itself. Surely this is a case of straining at the enema and swallowing the pessary. Perhaps if it were given the chance the patient's cat would oblige by swallowing them both.—I am, etc.,

London, S.W.12.

W. P. M. DAVIDSON.

The Lazy Eye

SIR,—Your recent correspondence on "The Lazy Eye" has drawn attention to the significant number of adults who have subnormal visual acuity in one eye. The figures quoted by Dr. G. C. Dansey-Browning (Nov. 15, p. 796) and Dr. Alan Watson (Dec. 6, p. 933) emphasize the seriousness of the problem. Mr. T. Keith Lyle (Sept. 6, p. 398) stressed the need for treatment at an early age, and surely this is the pointer to the root of the trouble.

The present school ophthalmic service is essentially curative, and until it becomes preventive the incidence of visual defects at school-leaving age will continue to rise. A school child does not receive any ophthalmic treatment until the error becomes manifest to teacher or parent, or a drop in acuity is revealed by a medical examination. The Board of Education's 1931 report "On Problems Connected with Defective Vision in School Children" recognized the need for treatment of ocular defects at the earliest possible moment, before faulty visual habits become established in the children. The committee stated that a regular objective ophthalmic examination of every child was desirable in order that visual defects should receive early treatment, but it doubted if financial and administrative difficulties would permit. Now in 1947, sixteen years later, the position is not changed, and it is obvious that until yearly ophthalmic inspection of every school child is begun, coupled with adequate provision for the visual care of pre-school infants, the number of adults with "lazy eye" and other ocular troubles will continue to increase.—I am, etc.,

Henley-on-Thames.

S. BLACK.

Sterilization of Syringes

SIR,—The important question of sterilization of syringes, needles, and specula has been discussed recently in your columns, and we should like to make the following comments on the advice given. You state in "Any Questions?" (Oct. 25, 1947, p. 680) that, in the absence of an autoclave, the best method for sterilizing the above articles is to place them in a dry oven at 150° C. for one hour. This time is inadequate. The Medical Research Council War Memorandum No. 15 states: "Syringes and needles are placed in the oven while it is cold; the time of sterilization is not less than one hour after 160° C. has been reached. The oven should be allowed to cool before the syringes and needles are removed." The M.R.C. Memorandum also advises reliable thermostat and temperature control and control tests with infected material containing spores. These latter precautions are important because when, as is usual, syringes are sterilized in wrapped or plugged test tubes, there is a considerable time lag before the whole of the syringe is actually at the temperature of the oven, and this time lag must be allowed for in the time required for sterilization.

There is a comment by Messrs. John Foster and C. H. le May (Nov. 22, 1947, p. 854) on this question of hot-air sterilization. They quote Hanne¹ in support of their contention that sterilization by means of hot air is an unsatisfactory process. In fact, what Hanne's work emphasizes is the inefficiency of most of the hot-air sterilizing ovens which he tested and the inadequacy

of the so-called "sterilization" techniques which were being employed. Hanne's failure to kill *B. mesentericus* under the conditions of his experiments should not be quoted as a condemnation of hot-air sterilization in general. His work does, however, call attention to the necessity of ensuring that the temperature shown by the oven thermometer is being maintained equally throughout the oven.

Although many ovens fall short of this ideal, there is one made by a reputable British firm which is stated to have a maximum temperature variation throughout the oven of $\pm 1^\circ$ C. The question of hot-air sterilization was discussed very fully in a letter on "The Sterilization of Sulphonamides" which appeared in the *Lancet* (Sept. 12, 1942) from Prof. Long of the Johns Hopkins University School of Medicine. To quote from this letter:

"We obtained the most heat-resistant spore-formers we could find—one strain of *Cl. novyi* which the suture manufacturers use as a control organism and a strain of *Cl. sporogenes* used by the canners as a control organism. Most of the information in textbooks concerning the heat resistance of spores in hot-air ovens was built up before the present accurate thermo-electric instruments were available. Since the temperature usually given for hot-air sterilization (160° C. for one hour) is so near the melting point of sulphanilamide (163° C.), we decided to restudy the resistance of some of the spores, making use of some of the more modern instruments with extended time as is practised by some canners. It has been found that the most resistant spores of *Cl. novyi* and *Cl. sporogenes* can be killed at a temperature far below the melting point of sulphanilamide if the time element is extended sufficiently: 130° C. kills these organisms in four hours but not in three; 140° C. kills in three hours but not in two; 150° C. kills in two hours. Various types of forced air ovens have been tried, both electric and gas. The above temperatures will not hold for static ovens or ovens improperly baffled so that one obtains cold spots.

Further suggestions on the sterilization technique for the preparation and administration of solutions for intra-spinal anaesthesia are given in a memorandum published recently by the Public Health Laboratory Service and the London Sector Pathologists Committee (*Pharmaceutical Journal*, 1947, 159, 428).

We think that it must be agreed that sterilization by dry heat is a satisfactory method provided that the following requirements are met: (1) An adequate temperature must be maintained for an adequate time. (2) The time of sterilization must begin from the time when the whole article is at the desired temperature. (3) The oven employed must not have "hot" or "cold" spots. (4) Attention must be given to the circulation of the air in the oven if big batches of items are being sterilized. (5) A careful check must be kept by means of thermostat, thermometers, and contaminated controls to ensure that the process is efficient. The controls should be spaced throughout the batches.—We are, etc.,

Hertford.

CHARLOTTE RIESENFELD.
JOHN C. H. HANSON.

REFERENCE

¹ Hanne, R., *Pharm. Ztg.*, Berlin, 1937, 82, 2.

Space for X-ray Departments

SIR,—I am much obliged to Dr. Douglas Gordon (Dec. 13, 1947, p. 977) for drawing my attention to the recommendations of the British X-ray and Radium Protection Committee. The plan which I put forward, as Dr. Gordon agrees, was stated not to attempt perfection in detail, and there is therefore no need to defend it. It is hoped, however, that the interest this plan may arouse may be on general principles rather than concerned with detail. Nevertheless, it is obviously important that attention should be drawn to these regulations, which were not only unknown to me but also to a distinguished architect. As Dr. Gordon has pointed out, even architects of the Ministry of Health are unaware of these regulations, and this emphasizes the need for some co-ordination and specialization in the designing of hospitals.

Many hospitals have been built by excellent architects who have been equally at home in designing a hospital, a house, a hotel, a cinema, a school, or a town hall. Recently the need for some specialist in hospital construction has been brought to my attention in my efforts to improve the lighting of