immediate adhesions from forming between the anterior and posterior wounds. (4) When removed it carries away with it any blood or clots that may be lying in the vagina. (5) It prevents urine from running into the vagina. There is special liability for this to happen when a patient is lying on her back. From the very beginning of the first week in bed the patient is encouraged to move the lower limbs, especially the ankle joints, freely in order to obviate the risk of venous stasis with the possibility of clotting and embolism.

Patients are kept lying in bed after operation, without once raising themselves or being raised, for two weeks. During the third week they are free to sit up in bed. At the end of three weeks they get up. A few days later they are allowed home, but are given special instructions as to carefulness about refraining from any undue strains for the next two months. Before leaving hospital they are examined, a finger being inserted into the vagina so that any small plastic adhesion between anterior and posterior wounds may be broken down. Two months after leaving hospital the patient reports for a final examination so that the result may be assessed. I have found that this routine has given excellent results and it is quite simple to carry out as far as the nursing is concerned.—I am, etc.,

Dundee.

A. E. CHISHOLM.

Smallpox in the Vaccinated

SIR,—As a ship surgeon concerned with the vaccination of crews I find myself in agreement with Dr. C. Killick Millard, who recommends (Oct. 12, p. 552) that vaccination of those likely to be exposed to smallpox should be carried out on the principle of "little and often." In the course of about thirty-five years at sea I have had to deal with smallpox on five occasions, though in only one instance was a member of the crew involved. This latter occurrence led me to reduce the interval between revaccination from two years to one year. I consider yearly revaccination a necessary and sufficient routine measure for the type of population referred to. Exceptionally, cases of modified smallpox do occur within a year of successful vaccination, and I have encountered instances of successful revaccination repeated within an interval of much less than a year; but the answer to these exceptional cases of comparatively fleeting immunity is not, I think, to reintroduce multiple-mark vaccination for all but to note anyone in whom this tendency is suspected and revaccinate him more frequently.

The duration of immunity after successful vaccination appears to be a personal characteristic (possibly a family one) independent of the number of marks made on vaccinating. On the one hand one finds the man with a small solitary scar made in infancy and conferring lifelong immunity of a high degree, and on the other hand the man with one or both arms pitted with a series of multiple marks in whom immunity must be short-lived.

For the past twenty years I have used the intradermal method of vaccination, and I often find it possible to obtain a successful result by this method when recent attempts by scarification have failed. In dealing with large numbers the method is time-saving as well as economical, as no primary dressing is required. Seamen who protest against revaccination can usually be persuaded to have an immunity test carried out by this method, and infants can often be vaccinated while asleep. Finally, for those interested in the study of immunity reaction the intradermal puncture affords an ideal opportunity of observing the rate of development of the areola and papule, etc. In this connexion I have carried out the procedure on myself on some sixty-odd occasions during the past few years and can testify as to its simplicity, safety, and reliability.—I am, etc.,

Rustington.

A. GARDNER.

Grafts for Fractured Neck of Femur

SIR,—I was greatly interested to see Mr. F. P. Fitzgerald's description (Dec. 7, p. 861) of his instruments and technique for the insertion of chip grafts in fractures of the neck of the femur. For some time I have been thinking and hoping that the superior osteogenic and vascularizing power of medullary grafts from the crest of the ilium would help to reduce the vexing number of cases of non-union and avascular necrosis

seen in these fractures after simple nailing. I was therefore much encouraged to read that Mr. Fitzgerald's results have been very satisfactory, particularly as I have recently had a somewhat similar set of instruments made to my design and have not yet had sufficient time to judge the success of the results.

I use a one-piece pencil graft cut from the iliac crest with a saw made from thin-walled 3/8 in. (0.9 cm.) tubular stainless steel with the teeth cut at one end—i.e., a trepanning saw. With this an excellent graft can be cut in a matter of seconds with the aid of a pneumatic drill. The graft is then slid via a cannula into a tunnel drilled into the head of the femur. I am able to insert both the graft and the nail without having to expose the femur, thus saving time and lessening shock in the most frail and ancient patients.—I am, etc.,

Bedford.

G. S. STORRS.

Amoebiasis

SIR,—Dr. G. W. Hayward is to be congratulated on his excellent article on amoebiasis as seen in Italy which was published in the *Journal* of Sept. 28 (p. 457) of this year, and which has only recently reached me. His description of the more chronic and insidious manifestations of amoebiasis is most opportune in view of the large number of troops still returning to the U.K. from amoebic endemic areas. I would, however, beg to disagree on certain points concerning amoebiasis as seen in India nowadays and add a few remarks concerning diagnosis and results of treatment.

In the Far Eastern theatre during days of war frank dysenteric symptoms of amoebiasis were common, due mainly to massive infection often occurring in debilitated personnel and also to concomitant bacillary infection, the role of which will be discussed later. These cases were usually treated with sulphaguanidine either in unit lines, in field ambulances, or casualty clearing stations, with, in the majority of cases, a resultant cessation of diarrhoea. They were then returned to the fighting line only to suffer at a later date the inevitable relapses with diarrhoea, abdominal disturbances, loss of weight, and sometimes hepatitis. Through the long passage back to a base hospital via "normal lines of communication," during which time the patients were often inadequately treated, the disease had ample time to become chronic, the amoebic ulcers being secondarily infected with a variety of pathogenic organisms which seemed to prevent the anti-amoebic drugs from having their full effect. Such cases were eventually evacuated to U.K. having had many courses of anti-amoebic treatment with little effect, until the advent of penicillin plus sulphonamides, which combination clears the large bowel of secondary infection and allows the anti-amoebic drugs their full action. This course now cures the majority of cases. Previously results of treatment in these cases was admittedly poor, and a certain number of them perforated and died of the resultant peritonitis or succumbed to amoebic hepatitis. It must be emphasized that such cases have rarely arisen in India Command either during or since the war, and are now, to the best of my knowledge, seldom seen in any part of the Far Eastern theatre. They were due mainly to the exigencies of war which caused delay in treatment, while part at least of the dysenteric symptoms was due to a co-existing bacillary infection, a finding which has been extremely common. I do not believe that the underlying amoebic infection differs from that seen in other parts of the world, for when early and adequate treatment was given to these cases they almost invariably did well.

The question of mixed infections is one of very considerable importance, and some observers go so far as to say that all cases of amoebic dysentery are primarily associated with a bacillary infection. The sequence of events is as follows. A patient is admitted with diarrhoea, the stools containing blood and mucus. Microscopically, red cells, pus cells and macrophages, Charcot-Leyden crystals, and vegetative *Entamoeba histolytica* are seen. If in order to clear the bacillary infection sulphaguanidine is given, the diarrhoea usually ceases, and, this being very important, red cells, pus cells, and frequently *E. histolytica* disappear from the stools, a point first described by Ransome and Stokes. This disappearance of *E. histolytica* is presumably due to healing of the amoebic ulcers by eliminating the bacillary element. It is therefore of fundamental importance that even a seemingly straightforward

case of bacillary dysentery occurring in endemic amoebic areas should have very careful stool and sigmoidoscopic examination to ensure that no amoebic element exists. If this is omitted the patient will often be readmitted after a few weeks with the more insidious forms of amoebiasis.

To-day the type of case most commonly seen in India is that described by Dr. Hayward—the chronic case in which ill-health insidiously attacks the patient almost without his knowledge. Vague abdominal symptoms, of which flatulence and a sense of fullness occurring after a few mouthfuls of food are common; abdominal pain or discomfort, usually in the right iliac fossa and never severe; loss of weight, which is not rapid but which is in some cases as much as 1-1/2 stone (6.3-3.1 kg.); tiredness, lassitude, irritability, and lack of concentration: these are the commonest symptoms. Diarrhoea is seldom complained of, and a history of a certain periodic looseness of the bowels is only elicited on direct questioning. On examination patients look tired and unwell, the loss of weight often showing itself most noticeably in the face. The most valuable physical sign, as stressed by Dr. Hayward, is thickening and tenderness of the caecum and ascending colon, which sometimes can only be ascertained by deep palpation. Patchy tenderness over various parts of the colon has not been seen. Sigmoidoscopy has been very helpful, though the number of cases in which vegetative or cystic forms of *E. histolytica* have been found in a sigmoid swab when absent from the stool has been negligible. The changes seen in the rectal mucosa are more valuable pointers to the diagnosis. Stool examinations have not been so successful as in Dr. Hayward's cases, although I have not adopted so rigorous a means of purgation, having found that one or two large doses of salts early in the morning are sufficient to produce several watery stools.

Although positive stools have been found in the majority of cases, a group remains in which, from all points of view, the diagnosis of clinical amoebiasis seems justified. They presented the typical picture of chronic amoebiasis as previously described, but with entirely negative stools repeated up to a dozen times following purgatives, and an entirely normal rectal mucosa. These cases seemed to be caused by a very chronic amoebic infection strictly localized to the caecum. At first one was chary of giving these patients a course of treatment lasting for a month, but, having seen the dramatic improvement which has occurred in all cases so treated, there is now no hesitation in starting treatment in any case in which one feels certain of the diagnosis of amoebiasis, despite negative laboratory findings. I speak with some feelings on this point, having myself experienced the welcome return of well-being after treatment, which was not in my case aided by bed-rest.

Treatment has been along the lines laid down by the Army in India—i.e., "diodoquin" tabs., 3 t.d.s., days 1 to 20; emetine, 1 gr. (65 mg.) intramuscularly, days 1 and 2; emetine bismuth iodide, 3 gr. (0.2 g.) at night, days 3 to 14; carbarsone, 4 gr. (0.25 g.) b.d., days 15 to 20. This treatment has been entirely satisfactory, and since its adoption approximately one year ago I have not yet seen a single relapse. There is no doubt that the adoption of "diodoquin" in place of retention enemata has made treatment far easier for the patient and nursing staff and far more effective.

I would end by again stressing (and it cannot be stressed too often) the utmost importance of realizing the existence of these chronic forms of amoebic infection and of investigating them on the lines suggested by Dr. Hayward in his paper. In this way much chronic ill-health and many cases of amoebic hepatitis may be avoided.—I am, etc.,

Namkum, India.

FRANCIS T. PAGE,
Capt., R.A.M.C.

Prevention of Infant Deaths

SIR,—I have read with great interest Dr. J. Tudor Lewis's excellent and informative article on the prevention of infant deaths (Dec. 14, p. 893). I agree with Dr. Lewis that there is need for the closest co-operation between maternity units, hospital, and home services, and I commend the trial scheme which he has described.

In connexion with the cases quoted it would be interesting to know the weight of each of the seven infants on discharge from the hospital or maternity unit. This information would enable one to assess whether these infants might well have been

kept in hospital for a longer period. This applies in particular to the five of the seven cases which were premature or immature, for it has been my practice to keep such premature infants in hospital until a weight of seven pounds has been reached; thus one is assured that the infant is robust on discharge and has a better chance of survival than if it is discharged when it has regained its mere birth weight.

Respiratory complications arose in four infants. It is well known that partial atelectasis tends to occur in weakly and premature infants. Moreover, respiratory infection of a latent or chronic type is so often missed because the clinical picture is dominated by dietetic difficulties and there is little, if any, rise in temperature. I would stress therefore the importance of *regular clinical examination of the lungs during the time the infant is in hospital*. One finds so often evidence of a patchy bronchitis, or occasionally more ominous localized patches with sharp crackling rales suggestive of an early pneumonic consolidation. Regarding Case 7 it is stated: "Antenatal clinic attended regularly," and later: "Mothercraft not very good." To my mind this is an important point and shows how hospital antenatal clinics concentrate unduly on the obstetric and medical aspects of pregnant women, neglecting the ever-important principle of teaching mothercraft during the antenatal period.

More emphasis should be placed on teaching the mother in her home, and health visitors should be especially trained in paediatrics, visiting homes more frequently than is the custom and having the fullest co-operation of the family doctor. It is in this latter respect that much improvement could be effected and the mutual antagonism existing so often between the family doctor and health visitor be eliminated. Perhaps medical officers of health might consult their local authorities to consider the advisability of setting up a panel of general practitioners in the district with special experience of paediatrics, who would be willing to visit and treat infants in their homes when the health visitor is not satisfied with the progress of such infants. The work of this group of doctors could be enhanced by including in this panel consulting hospital paediatricians whose clinical knowledge of the infant would render great service to the scheme. The realization by the public health authorities, and indeed by the medical profession as a whole, of the efficient co-ordination of all services vital to the well-being of the mother and her newly-born infant will be a big step forward towards the ideal we seek to attain. Until this is generally accepted we cannot hope for any noticeable improvement.—I am, etc.,

Leeds.

ISAAC ROSE.

Gastro-enteritis in Maternity Hospitals

SIR.—Publicity has recently been given to outbreaks of gastro-enteritis in the nurseries of some maternity hospitals. An outbreak of apparently similar nature occurred in the autumn of 1944 at the Royal Hampshire County Hospital at Winchester. Careful investigations by the research laboratory failed to disclose the causative organism, and it was presumed to be a virus infection. In spite of treatment which included blood transfusions by various routes we had a number of deaths among those infected, particularly the premature infants. Finally it was decided to employ sulphonamide medication, and in view of the gastric disturbance it was felt that probably sulphadiazine would be most easily tolerated. The dosage given was one-sixteenth of a gramme every four hours combined with alkalis. The effect was quite remarkable, and the remaining cases cleared up within the course of two or three days. After dealing with one or two further incipient cases the epidemic completely subsided. I think our experience at the hospital may be of use in dealing with similar outbreaks, and it is a treatment that I should not hesitate to employ should we have the misfortune to have any recurrence of this very distressing disorder.—I am, etc.,

Winchester.

C. J. PENNY.

Immunization against Whooping-cough

SIR,—I note with interest Dr. H. Sugar's letter (Dec. 7, p. 876) on the subject of immunization against whooping-cough. My experience in this matter has been very encouraging and may be worth recording. I have been medical officer to an orphanage since 1941 and have made a practice of immunizing all