Case 9.—Aged 77; first seen in Dec., 1942, complaining of frequency of micturition and haematuria. The general condition was good. The prostate was indurated, with extension to the right pelvic wall. X-ray examination of the pelvis showed no abnormality. A course of high-voltage therapy was given in Jan., 1943. By July, 1943, the prostate was still hard and fixed and enlarged to the right. The plasma phosphatase values were: acid phosphatase 2.9 units, alkaline phosphatase 5.5 units. Stilboestrol dipropionate was administered from the end of July, 1943, in doses of 5 mg. daily by mouth. After one month frequency was less, but no change was observed on rectal examination. This was the condition when the patient was last seen in March, 1944.

Case 10.—Aged 61; first seen in Sept., 1942. A suprapubic cystostomy had been performed elsewhere 20 months previously. The general condition was good. On rectal palpation the prostate was found to be enlarged and extremely hard. A clinical diagnosis of carcinoma of the prostate was made, and a course of high-voltage therapy given in Nov. and Dec., 1942. X-ray examination of the pelvis was normal. By Aug., 1943, there was little change in the size and consistency of the prostate. Radiographs showed an abnormal opacity in the left ischium, but plasma phosphatase values were now: acid phosphatase 1.2 units, alkaline phosphatase 8 units. Stilboestrol was given in doses of 5 mg. b.d. orally. On re-examination at monthly intervals the condition remained unchanged.

Discussion of Clinical Results

Palpable changes in the prostate were not produced in all cases. In Cases 1 and 2, in which the original condition was that of an enlarged hard nodular gland, both softening and shrinkage took place, the changes being well marked. The same type of alteration occurred in Cases 5 and 6, but to a less striking degree. No change whatever took place in Case 8—in which the disease rapidly proved fatal—and the findings were equivocal in Case 7. The remaining patients (Cases 3, 4, 9, and 10) had all been treated by high-voltage therapy previously, and in them no definite alteration in the prostate was detected. Hence of the 10 cases only 4 have so far shown definite regression of the primary tumour.

Palpable lymphatic spread was present in 3 of the series (Cases 1, 4, and 5), in each instance with an attendant swelling of the lower limbs. In all three cases a regression of the secondary masses took place, together with a reduction in the oedema.

Metastases to bone, in all 5 cases in which they occurred, were of the osteoplastic type. The appearance of radiographs taken at three-monthly intervals showed in some cases a progressive increase in density, while in others the deposits seemed to become more numerous during treatment, or increased in size.

Pain referable to bone occurred as a symptom in 4 of the series. In 3 cases it was a presenting symptom, while in the fourth it arose after the patient had been attending hospital for 2 years but before there was radiographic evidence of skeletal deposits. It was noted that some amelioration of such pain occurred in hospital with rest alone. Final assessment of the influence of stilboestrol on such pain is therefore best made when the patient returns to his normal routine. These four cases all secured a partial or complete relief from pain, and this has so far been maintained in three of them.

With the exception of Case 8 all showed some measure of betterment in general condition. This revealed itself in an improvement in appetite, a gain in weight, and, in the two cases with severe anaemia, by a gradual increase in haemoglobin. At the onset of treatment the haemoglobin values were 46% in Case 2 and 37% in Case 3. It required between 5 and 6 months for the haemoglobin values to reach 78% and 72% respectively. As each patient was given ferrous sulphate during the earlier period of his treatment the part played by stilboestrol in bringing about this improvement is not known.

Of all the symptoms associated with carcinoma of the prostate, frequency of micturition is likely to be the most uncertain in its response to any form of therapy. Even if a shrinking and softening of the prostate takes place, the extent to which micturition returns to normal must depend finally upon the degree of secondary changes in the bladder. Clearly it is only rarely that these changes will be so slight as to allow of a return to normal function. On the whole there appeared to be some measure of improvement in all the cases in which frequency was a symptom.

Summary

Details are provided of the method employed for estimation of acid phosphatase, and of the values obtained for plasma acid and alkaline phosphatase in various clinical conditions and in normal controls, and for acid phosphatase in seminal fluid. Two specimens of seminal fluid from a case of eunuchoidism contained relatively negligible amounts of acid phosphatase.

Of 10 cases of prostatic carcinoma, 6 showed a raised acid phosphatase content in the plasma: in 5 of these there was radiographic evidence of metastases in bone. Several of the results do not show any marked distinction between prostatic carcinoma with metastases and Paget's disease.

The behaviour of the plasma phosphatases, in cases of carcinoma of the prostate in which the plasma acid phosphatase was originally raised, was followed during treatment with stilboestrol. The response shows a uniformity of pattern, the acid phosphatase falling abruptly to a normal level, which is then maintained for considerable periods, with a rise in alkaline phosphatase followed by a gradual fall.

Of 10 cases of carcinoma of the prostate 4 showed some degree of regression of the primary tumour under treatment with stilboestrol, and secondary deposits in lymph nodes underwent regression in 3 cases. X-ray examination at 3-monthly intervals in those cases with metastasis to bone revealed in some a progressive increase in density, while in others the deposits became more numerous during treatment or increased in size.

With one exception all cases showed some measure of symptomatic and general improvement, in relief from pain, lessening of frequency of micturition, or gradual increase in haemoglobin level, and in improvement in appetite and gain in weight.

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MEDICAL EXPERIENCES IN NORTH AFRICA, 1943-4*

BY

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At the time of El Alamein the hospital sick rates, largely due to infective hepatitis, were at least as high as the battle casualties, and during the Sicilian campaign more men went down with malaria than from enemy action. In my experience at general hospitals in North Africa during almost exactly a year from the Tunisian fighting in March, 1943, till after the Anzio landing in 1944, hepatitis and malaria were again the two most serious medical problems. Bacillary dysentery was on the whole mild, and, though on occasion I had over 300 cases in hospital at a time, most of the men responded at once to sulphaguanidine, and were back on duty very quickly. The average stay in hospital was only ten days.

Infective Hepatitis

Infective hepatitis was at its worst in the autumn months of 1943 and dropped rapidly with the frosts in Jan., 1944. It was a serious problem in the spring among both our own and enemy forces, and I had in hospital a number of German prisoners who had been still fighting while suffering from jaundice. During Oct., Nov., and Dec., 1943, there passed

* A lecture read to the Teheran Medical Association, June 24, 1944.

through my division of 1,100 beds well over 1,000 cases of infective hepatitis. This compared with just over 1,000 cases of respiratory diseases—mainly “coughs and colds”—some 600 cases of malaria, and an almost equal number of cases of dysentery. During the same period some 300 skin cases were admitted, and nearly 250 cases of faucial and skin diphtheria. These figures, of course, give only an idea of the work done at my own particular hospital near Algiers. Among all the cases of infective hepatitis there was not a single death. Though it was possible to discharge many from hospital, often after only 15 days, even while the skin was still yellow, in most cases the illness lasted considerably longer; at the same time, only two or three were really critically ill, and none required invaliding home.

The *prodromal period* was variable, the average time elapsing between the onset of symptoms and the appearance of jaundice being 5½ days. In some cases, however, this period was as long as three to four weeks, the longest occurring in a case in which the first signs of jaundice took 42 days to appear. A number of cases never showed jaundice at all, and these are perhaps the most interesting and the most important. We were able to make an almost certain diagnosis of hepatitis without jaundice in over 30 cases, and I have no doubt that many mild abortive cases occurred and remained unrecognized. The clinical picture is, however, often highly characteristic, with pyrexia, nausea, vomiting, constipation, and extreme anorexia, so that in an epidemic the suspicion of hepatitis should be at once aroused, though in such cases proof of the diagnosis may be impossible. Hepatitis without jaundice may well be a major cause of the spread of the disease, and some observers have made the guess that for every case with jaundice there is at least one without. When jaundice does develop, its appearance is often coincident with great general improvement in the symptoms, and if the serum bilirubin is estimated daily a rapid fall is usually found soon after, followed then by a much more gradual drop to normal levels.

Infective hepatitis is, at its onset, one of the important causes of “P.U.O.”—sometimes resembling malaria, sometimes like typhoid, or sometimes with severe headache, rigors, and intense vomiting, even suggesting a meningitis. Just under 10% of my cases began with severe coryzal symptoms, and this mode of onset is recorded as occurring in over 30% of cases in other epidemics.

In some cases the *fever* may be only slight, but in others it is severe. *Constipation* occurred in 70% of my cases, while diarrhoea was present at the onset in 8%. It was an interesting observation, which may be of no significance at all, that several patients recorded attacks of severe and unexplained abdominal pain with vomiting lasting for one to two days, occurring almost exactly four weeks before the onset of their illness. Itching of the skin was very rare, but urticarial rashes occurred at the onset in four cases.

I can give no good indication as to the mode of infection. Though hepatitis is to some extent a wartime disease, there is not yet any clear proof of its mode of transmission. I have no doubt that droplet infection does not account for the whole story. In our hospital, where over 1,500 cases were nursed, the incidence among the staff of the medical division was *nil*. The only members of the unit as a whole (about 300 in number) who contracted the disease were the theatre sister, one of the surgeons, two surgical medical officers, two operating-room assistants, three clerks, and four orderlies working in the surgical wards. I could not help having a suspicion that actual contact with blood had some causal relationship in these cases, and the transmission of hepatitis by blood transmission, as well as by infected syringes, would suggest this as a possibility.

Many interesting tests have shown that the virus of infective hepatitis in blood is able to survive most simple measures of disinfection, and that nothing short of careful boiling of syringes, for example, is effective in preventing possible transmission by such procedures as intravenous therapy. Here traces of blood drawn into the syringe at a first injection may subsequently be injected with the next and thus infect the patient. This accounts for at least some of the cases of “arsenical” jaundice in syphilitics, in which the cause is not in fact the arsenic but the virus given with it. In some clinics

with imperfect sterilization the incidence of jaundice has been as high as 40 to 50%, and in these cases the incubation period has seemed to be about 100 days; a similar period has been suggested from a study of cases of jaundice following serial blood-sedimentation-rate tests.

Inoculation of animals and human volunteers has not yet given conclusive results. Canaries, pigs, and other animals have been tried without success, but suggestive experiments in man have indicated that blood, duodenal juice, and faeces probably contain the virus up to some time after the appearance of jaundice. It has, of course, been the hepatitis virus in the serum—either given for treatment or used for the preparation of vaccines—which has been responsible for the occurrence of jaundice following inoculations of convalescent serum for measles and mumps and of yellow fever vaccine, after which over 28,000 cases occurred in the American Army in 1942: here again the incubation period varied between 40 and 150 days.

Among my own cases the *incubation period*, so far as I can judge, seemed to be from 21 to 28 days, though others have thought it to be as long as 6 to 12 weeks.

In one interesting incident two officers admitted to my division under Major Keele, R.A.M.C., had escaped from a P.O.W. camp in Italy, and had wandered for several weeks in the countryside, keeping hidden and avoiding all contacts with human beings, barely even meeting or speaking to a soul. Their only real contact during this time had been on Nov. 10, when they were joined for one night by a partisan who was feeling ill and for warmth slept between them in a barn. They noticed that he looked a little yellow when he left them in the morning, and exactly 22 and 23 days later respectively the two officers went sick with infective hepatitis.

There is no definite proof yet of *transmission* by faeces-contaminated food or water, or of any insect vector, and flies, fleas, and bed-bugs have not yet been incriminated. Officers in general show a higher incidence of hepatitis than do other ranks—this was so in my cases—and it has been suggested that this is because officers' mess kitchens have more flies than anywhere else, though not, I think, that officers have more bed-bugs than other ranks!

Treatment.—Though I feel confident that it will not be very long before the mode of transmission of infective hepatitis is demonstrated and that prevention may then soon follow, I am more doubtful how far successful treatment of the established disease is likely to result. Up to now the hoped-for benefits from the administration of cystine, methionine, casein digests, choline, or other amino-acids have not developed, though at least it seems certain that adequate protein as well as carbohydrate is important during and after the illness. Restriction of diet may be necessary symptomatically owing to anorexia and nausea, but as soon as possible full allowance of all constituents in the diet, including protein and fats, is, in my opinion, advisable.

Malaria

Nothing surprised me more about malaria in North Africa than its difference from malaria in West Africa. In North Africa we saw both benign tertian and malignant tertian. There were many relapse cases—some severe, persistent, and resistant to treatment—but in over 1,000 patients admitted to my division there was not a single death. This was certainly better than in West Africa, where I had one death from cerebral malaria and one from blackwater fever in roughly the same number of cases, but for clinical severity the M.T. malaria of North Africa was unquestionably the more alarming. In North Africa the condition was more polysymptomatic, the need for treatment more urgent, and the response often less satisfactory: here intravenous quinine injections became a frequent and almost usual procedure, while in West Africa it was rare. During the malaria season over 1,000 injections were given in my hospital with only minor symptoms on two or three occasions. This timely intravenous quinine no doubt saved many lives among desperate cases, even though a considerable number would almost certainly have recovered with oral treatment alone. Of the many well-known and important lessons about malaria—often learnt, perhaps, at a price—these were some that we learnt once more in North Africa.

1. In a malarious country headache is not to be regarded as due to psychoneurosis until malaria has been excluded.

2. Malaria with low fever may be more dangerous than with high, because it is more easily missed.

3. To wait for a positive blood slide or a palpable spleen costs more lives than to treat a suspicious case on an unproved diagnosis.

4. The exact date of onset of malaria is not the same thing as the date of admission to a medical unit: where a man lives may be much more important than what he does.

5. To transfer a case of active malaria without treatment and without full precautions for continuation of treatment is a medical crime.

6. Other diseases do not exclude malaria; and malaria, especially relapsing malaria, has often some complicating disease.

7. Diarrhoea with blood and fever is not always due to dysentery; jaundice with fever is not always infective hepatitis; malaria may mimic both. Asthma, fibrositis, neuritis, urticaria, and nephritis are only some of the less-well-recognized conditions that malaria may cause, while it may simulate at least a dozen others.

Diphtheria

Both in the Middle East and in North Africa, faucial, nasal, and cutaneous diphtheria were important causes of sickness, prolonged stay in hospital, serious complications, and deaths.

The diagnosis of faucial diphtheria was, as always, easily missed, and a number of cases appeared clinically to be merely simple quinsy or tonsillitis with no definite membrane that could be seen. Among my own unselected cases the incidence of complications was low—only 5%; out of 35 cases with complications 16 showed peripheral neuritis, the average time of onset being 6½ weeks from the time of the sore throat. One faucial case ended fatally; this in spite of receiving 216,000 units of serum within the first three days of the infection. The average dose of serum used in throat cases was 85,000 units; but the complicated cases, on analysis, were found to have had serum considerably later in the disease than the uncomplicated. Massive dosage seemed in these cases to be undoubtedly less important than early dosage—at least in preventing complications. One-fifth of all the cases showing complications received no serum at all, and among uncomplicated cases 56% received serum within the first two days of their illness, as compared with only 29% among the complicated cases.

Cutaneous diphtheria is a most interesting and important condition. In my own cases it was not always possible, for various reasons, to distinguish between skin lesions infected with avirulent organisms and those infected with true *C. diphtheriae*. An analysis of over 76 lesions from which organisms morphologically resembling *C. diphtheriae* were cultured gives some interesting findings. Only a few of the lesions show characteristic features: they may be in the form of ulcers, superficial weeping or crusting "dermatitis," or purulent infections of wounds, abrasions, burns, or superficial injuries. They all show a notable chronicity and failure to heal; the average duration of the cases before diagnosis was 50 days and the average stay in hospital before healing 35 days. Of the lesions 40% were on the legs, 25% on face or ears, only 10% on hands or arms, and the remaining 25% either generalized over the body or on isolated parts such as scrotum, groin, or buttock. The lesions were frequently multiple, in one case as many as 31 separate ulcers, varying in size from 1 in. to 3 in. in diameter, being present all over the body.

Diphtheritic ulceration sometimes shows a black crust or slough which leaves a bleeding surface if removed, and these cases often clear up rapidly and completely after injection of quite small doses of serum such as 24,000 units. The chronic desert sores so common in the Middle East and North Africa are more common on hands and arms, and rarely show the dark crusting of diphtheritic ulceration; seborrhoeic or eczematous lesions present few characteristic signs when infected with *C. diphtheriae*.

Complications.—In 12 of my cases there was coincident infection of skin and of the throat or nose, and in 9 of these the skin infection definitely preceded that of the throat or nose. Auto-infection from "hand to mouth" thus appeared to be a frequent occurrence, arising in approximately 10% of the cases, though the reverse process—from nose or throat to skin—can also, of course, occur. The virulence of the organisms could not always be tested; but infection of ward personnel is an appreciable risk, one sister and one orderly in the skin

wards contracting faucial and the medical officer in charge contracting a cutaneous diphtheria. The incidence of complications, too, is not low—probably due, in part, to the long time-interval often elapsing between infection and recognition of the organism. Five proved cases showed complications, 2 patients died, and 19 cases of polyneuritis were almost certainly due to skin diphtheria, though they were not proved bacteriologically. These cases were, however, too selected to afford an accurate estimate of the percentage incidence of complications, which probably lay between 5% and 10% of all cases.

The lesions associated with complications were in the main large, and involved soft tissues; both deaths occurred in patients with extensive infection in regions with considerable areolar tissue—buttock and neck. In the first of these, infection apparently arose spontaneously as a boil on the buttock, which rapidly developed into an abscess and was incised. No suspicion of diphtheritic infection was aroused and, of course, no serum was given. The patient was first seen on the 34th day of the lesion, when a marked triple rhythm was heard at the apex of the heart and the pulse rate was persistently rapid—100 to 120; I at once suspected a diphtheritic myocarditis, and cultures of the abscess showed *C. diphtheriae*. On the 36th day diplopia developed, and 12 days later a palatal palsy and peripheral neuritis of arms and legs. Death occurred on the 60th day, post-mortem examination showing an intense toxic degeneration of the heart muscle. The second patient showed similar changes at necropsy, death occurring on the 43rd day of illness. In this case a long-standing seborrhoeic dermatitis was secondarily infected with *C. diphtheriae*, and an extensive brawny cellulitis of the neck developed, from which the organisms were cultured.

Severe polyneuritis following chronic cutaneous ulceration was often seen, though some cases showed only paraesthesiae, loss of reflexes, and very slight weakness. In most cases the polyneuritic symptoms began between 6 and 10 weeks after the skin lesions were noticed; a typical case history is as follows:

Pte. M., aged 37. Whitlow on right toe noticed Nov. 18; incised Nov. 22. Small ulcer formed with black adherent slough—resistant to treatment. Dec. 18: Ulcer swab showed *C. diphtheriae*; 32,000 units antidiphtheritic serum given. Jan. 1: Ulcer healed. Jan. 20: Blurring of vision; further 32,000 units given. Jan. 28: Paraesthesiae of hands and legs noticed. Feb. 20: Gross paralysis of both legs, with loss of reflexes; arms weak; marked loss of sensation. Heart good. Skin lesions healed. Routine throat and nose swabs negative for *C. diphtheriae* throughout.

Peripheral Neuritis

Peripheral neuritis occurred relatively often in North Africa, either as a symmetrical polyneuritis or as isolated individual lesions, such as winged scapula, foot-drop, or a brachial neuritis. Many cases undoubtedly followed skin diphtheria. Some seemed to be due to malaria or dysentery; in others treatment with such drugs as emetine possibly played a part. Cases of sudden acute infective polyneuritis also occurred, often resembling poliomyelitis, but with gross sensory changes. This disease was also seen in the war of 1914–18. In North Africa it began with severe backache, headache, and fever; weakness and sensory loss in the limbs, both proximal and distal, appeared within a few days or a week. It is interesting that German writers (Wilke, 1944) report a high incidence of polyneuritis among their troops on the Russian front, similarly involving muscles such as serrati, deltoid, or quadriceps, as well as peripheral types, and attribute the conditions almost entirely to infection with the Flexner or Shiga-Kruse bacillus. Though this is certainly a cause in some cases, it is doubtful whether it is quite as frequent as they maintain.

Immersion Foot

Most of the men coming to my hospital for trench or immersion foot had not had their boots off for over 10 days, having been forced, as at the Sangro River, to remain almost stationary in mud and rain for many days owing to constant shelling.

In immersion foot the initial signs are of coldness of the foot and leg, followed by hyperaemia and severe oedema, with loss of most forms of skin sensation. It is vital not to provoke

hyperaemia by warming the leg up in any way; the worst cases occurred among those who, against instructions, had put their feet by a fire as soon as they took off their boots. The damage caused by the wet and chill leads to stagnation of the circulation and then hyperaemia, with oozing of fluid from the capillaries and diminished vitality of nerves, skin, and muscle; in severe cases irreparable loss of function may result, but in the milder cases the tingling, pains, and oedema subside in one or two weeks. The hyperaemic stage may last many weeks with sometimes intense hyperaesthesia, but in most of my cases full recovery occurred within 6 weeks. In some men there had been a lifelong tendency to cold hands or feet; and in the worst cases lasting sequelae, including hyperhidrosis and extreme sensitivity to cold, may persist.

As a rule immersion for periods of many days is necessary to produce symptoms, as has been the case with numbers of men torpedoed at sea and remaining afloat for a long time in open boats; but sometimes minor degrees follow shorter periods. This occurred, for example, in the case of an officer who fell into the sea during the glider landings in Sicily and had to stand in the water hidden under a cliff for about 10 hours, after which he walked some 18 miles in a hot sun; later his feet swelled and became anaesthetic—symptoms which still persisted when I saw him 8 days later.

No specific treatment was given, but strict avoidance of any artificial heat, as by hot-water bottles, was essential, and cooling by fans has often been adopted. Careful Buerger's exercises seemed to do good.

Anxiety States

In the fighting in North Africa, as in other theatres, many acute anxiety states and conditions of severe physical exhaustion or terror occurred, as well as gross sensory and motor manifestations of hysteria. Few things in the future may be of more far-reaching importance than the development of personnel selection and the attempt to prevent psychological breakdowns under stress and strain. How far the art of selection of men and women may go in education, industry, or social life no one can foretell, but war psychiatry has certainly shown the way in its insistence upon the testing of a man's personality and intelligence, as well as his physique, before choosing him for any special appointment.

To me, however, it was almost more remarkable to see, not how many men broke down in battle, but how much the human mind and body were able to stand without collapse. A soldier lay under a truck with his friend while being bombed; his friend crawled half out to look around, and when, a little later, the first man pulled him back, his head had completely disappeared. Is it surprising that the survivor developed an intense hysterical blindness?

Most breakdowns at or near the battle-front occurred in the psychologically predisposed, and it should therefore be possible to some extent to detect the mentally unfit by careful selection before they get so far. War is teaching us more and more just how much we are able to select and judge in advance, and just how near the real thing methods of trial and training have got to be before we can eliminate early the psychologically unfit.

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The *Housing Manual*, 1944 (H.M. Stationery Office; 2s.), which has been prepared by the Ministry of Health and the Ministry of Works and sent to all local authorities in England and Wales, gives technical guidance to local authorities, architects, builders, manufacturers, and others on the lay-out, planning, construction, and equipment of permanent houses to be built under the Government short-term housing programme covering the first two years after the end of the war in Europe. In the light of this technical guidance local authorities will now prepare their own plans. In general, the standards recommended are those proposed by the Design of Dwellings Subcommittee of the Minister of Health's Central Housing Advisory Committee (the Dudley Report). The ground covered in detail by the manual includes: Site planning and lay-out, plans of houses and flats, plans for special occupants—e.g., old people—efficiency in building, new materials and methods, services and equipment. The great majority of houses built by local authorities under the short-term programme are likely to be of the three-bedroom type.

ANALGESIA IN LABOUR

A RECORD OF 102 CASES TREATED WITH PETHIDINE

BY

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It is now nearly a century since Simpson discovered the use of chloroform as an anaesthetic and advocated it as an analgesic in labour. At that time there was a public outcry against any drug being used for the relief of labour pains, and it was only, one might say, by a Royal Warrant, that chloroform was accepted as an analgesic in labour. Times have changed, and there is now a growing tendency in this country for the expectant mother almost to demand that her doctor arrange that she should not feel pain during her delivery. In the United States of America this public demand has been so great that the use of analgesics in labour has been considered one of the causes of the high maternal mortality and morbidity rates from which that country suffered some years ago, as uterine contractions were interfered with to such an extent that operative deliveries were very often required. Since Simpson's advocacy of chloroform many other drugs have been tried, and up to now, though each has had its advocates, none has been found acceptable to all authorities; this is because the ideal analgesic has not yet been discovered. In 1906 Gauss, in Freiburg, advocated "twilight sleep,"—with a combination of morphine and hyoscine—and, though this was widely used for a number of years, reports of its apparent bad effect on the baby came from different sources, and for this reason it fell into partial disuse. We doubt, however, if all the allegations against twilight sleep are true, for it is common knowledge that not every baby cries immediately it is delivered; but, if twilight sleep was used and the babe was a little difficult to bring round after birth, this was immediately attributed to the analgesic. Series of cases have been reported from Edinburgh (Johnstone, 1917; Haultain, 1920-1; Greenwood and Hirschman, 1922) and elsewhere (*Proc. roy. Soc. Med.*, 1918) of excellent results with twilight sleep in the accomplishment of amnesia and analgesia without any really bad effect on the baby. As with many other treatments, there is a right and many a wrong way of administration, and if the correct rules as formulated by Gauss are observed, then the results, in our opinion, are good, whereas if they are departed from accidents may occur, and with twilight sleep it is the baby who may suffer. There is little doubt that if twilight sleep is employed properly it is a most useful and safe analgesic in the long tedious labour.

Nearly 20 years after Gauss's discovery Gwathmey (Gwathmey *et al.*, 1923) described his synergistic method, but though it has its advocates it has never found much favour in this country. In 1924 a barbiturate—somniafene (Cleisz, 1924)—was first tried in labour as an analgesic, and since that time a large number of derivatives of barbituric acid have been used, especially in the United States of America (Gould and Hirst, 1935), and each separate hospital and clinic which was visited there in 1939 seemed to be enthusiastic over its own special barbiturate, or combination; but this enthusiasm was usually confined to its sponsors, and was not shared by other hospitals.

Conditions for the Ideal Analgesic

A most comprehensive treatise on the relief of pain in labour was read before the eleventh British Congress of Obstetrics and Gynaecology by Sturrock (1939), showing, as well as does this short preamble, that the ideal analgesic in labour has still to make its appearance. That being so, one is always on the look out for any new preparation that might fulfil the conditions essential for the ideal analgesic. These conditions might be summarized as follows:

1. That the analgesic does not endanger the life of the mother or have any harmful effect upon her.
2. That it does not harm the child.