Loss of life due to poisoning is always to be regretted. Cases of poisoning in 1946 were usually accidental or due to carelessness. The soldier rarely destroys himself by deliberately taking poison. During the winters of 1945–46 and 1946–47, the most frequent cause of accidental death was carbon monoxide poisoning. This was due to an endeavour to keep warm during the winter, in an unventilated room, with a charcoal or coke stove burning. It occasionally was due to the escape of coal gas from a gas stove or hot water geyser.

Deaths due to carelessness were more frequent and were often associated with demobilization parties. Crude schnapps having been purchased, contrary to orders, from D.P. women; usually Poles. During 1946 there were:

(a) Methyl alcohol: 25 cases: 10 deaths.

The patients were usually unconscious when admitted to hospital. Those that recovered had impaired sight ranging from total blindness due to retrobulbar neuritis or if of later onset, optic atrophy, to central scotomata or contraction of the visual fields. No survivor escaped some degree of damage to his sight. As these cases were not usually found until the morning after the party, washing out the stomach did not assist them. They did not respond to intravenous sodium bicarbonate solution. Replacement of the methyl alcohol in the tissues with ethyl alcohol (whisky) was not attempted.

(b) Ethyl alcohol: 24 cases: 4 deaths.

At post-mortem examination death had resulted from vomit entering the larynx and trachea and causing suffocation.

In the case that survived there were no sequelae.

(c) Ethylene glycerol (Anti Freeze Mixture):

In 1946 it occurred mainly amongst German Prisoners of War employed in transport units. It reappeared in 1949, after the currency reform, amongst British other ranks. Symptoms are of slow onset over two or three days. There is a complaint of tingling in the hands and feet. Later wrist and foot drop may develop. Coma is followed by death.

Poisoning due to morphia and barbiturates was found amongst civilians. 1947 found the B.A.O.R. relatively adjusted and there were fewer admissions as a result of poisoning.
Syphilis had been treated with penicillin, 4 million units, by intramuscular injection. This treatment did not completely control the infection. Consequently at the end of 1946 instructions had been issued to combine arsenic and bismuth with the penicillin.

B.A.L. (British Anti-Lewisite) was available, in adequate quantities, as an antidote to arsenic. During the course of the year, there were 3 cases of acute arsenical encephalopathy, with 2 deaths; 29 cases of severe exfoliative dermatitis, no death; 7 cases of agranulocytosis with recovery in all. Dr. K. Robertson has studied 4 of these cases in detail (Robertson, 1949).

The community remained adjusted during 1948. Cases of poisoning were few. In the study of cases of jaundice it, however, came to notice "that where good laboratory evidence of simultaneous renal and hepatic damage was obtained," the question of carbon tetrachloride poisoning had to be considered (Gauld, 1948).

The history of exposure to carbon tetrachloride fumes is only obtained by careful questioning. The patient does not realize that he has been exposed to the fumes. The study of the subsequent illness, after accidentally drinking one ounce of carbon tetrachloride by a male, aged 53, has been made and recorded by Dr. R. W. E. Watts. The patient reported sick about ten days after drinking the carbon tetrachloride, with discomfort in the upper abdomen. He was in uraemia, was jaundiced and lapsed into coma. There was gross damage to both liver and kidneys. He made a good recovery.

The civil element in B.A.O.R. was less adjusted in 1949. As a result, for the first time, deaths and admissions to hospital, after deliberately taking poison, were more numerous than the admissions due to carelessness.

There were two deaths from taking prussic acid: one after taking an overdose of phenobarbitone: two due to excessive consumption of ethyl alcohol, with subsequent vomiting and suffocation.

(16) **Psychiatry**

The appointment of medical officers as Specialist Psychiatrists has permitted a more humane application of the Army Act. The main application of psychiatry should be in the rejection of personnel who are unsuitable for life in the Army. This, however, is usually prevented, in its application, by the shortage of available man-power. Consequently the psychiatrist finds that he has to assist in the best utilization of the man-power, allotted to the Army.

Selection did play a large part in deciding who accompanied the 21 Army Group to France in 1944. So that at the time they landed on the Continent of Europe, it may be assumed that collectively, they were above average in mental stability, as found in the Army.

At the commencement of 1946 a large proportion of the B.A.O.R. was due to return to civil life. The psychiatrists at that time found that their work fell under four main heads:

(a) Dealing with psychotic cases.
(b) Dealing with disciplinary cases. Psychopathic delinquents formed a large proportion of this group.
(c) An increase in psychoneurosis precipitated by domestic and release problems.
(d) A very large number of venereophobes. This group had fallen to its average by the end of 1946.

During 1947 the Army was trying to return to its peacetime life and to find suitable material to train as non-commissioned officers. At this time although the incidence of psychosis was falling (Graph 9), the incidence of mental deficiency (Graph 10) was rapidly rising. *The National Service Soldier did not contribute to these groups. The men who formed these groups were men on regular engagements, usually re-enlistments, after release in 1946.* It will be seen that these graphs maintain their trend to 1949.

The number of psychiatric cases admitted to hospital in 1948 was 410—1·63 per cent of all cases admitted to hospital. This number can be further analysed: psychoses 71 cases (0·28 per cent); mental deficiency 32 cases (0·13 per cent); psychoneurosis and psychopathic personality 307 cases (1·22 per cent).

*The National Service soldier did contribute to the admission rate for psychoneurosis (Graph II).*

This shows a steady rise in 1947, since maintained. It is due mainly to the limited field from which the Army is permitted to select its members.

**GRAPH IX**

**Incidence of Psychoses—British Army, Other Ranks Only**

**Rate per 1,000 (quarterly).**
Graph X

Incidences of Mental Deficiency—British Army, Other Ranks Only
Rate per 1,000 (quarterly).

Graph XI

Incidences of Psychoneuroses—British Army, Other Ranks Only
Rate per 1,000 (quarterly).
From 1946-49 the basis of the dermatological work did not show much variation. The great bulk of the work, both with outpatients and cases admitted to hospital, was due to bacterial infections. The immediate cause of admission was frequently secondary infection, with either *Staphylococcus aureus* or a streptococcus, of a seborrhoeic or scabetic condition. The clinical conditions most frequently encountered were impetigo, eczema, sycosis barbae, boils and carbuncles.

In impetigo the recurrent seborrhoeic type was more frequent than the classical type. At first cutaneous diphtheria was relatively frequent. By 1949 it was not seen. Extranatal chancres were frequently seen until the end of 1948. The common sites were fingers, lips, face and tongue. The character of the secondary adenitis, caused by the chancre, usually gave a clue to the clinical diagnosis. The rash of secondary syphilis was relatively common and was frequently missed. It was seen most frequently in the autumn of 1948.

Scabies infections were common but treatment with benzyl benzoate emulsion was very effective, when properly applied. Tinea infections of the feet and groins were common. They did not give trouble, as a source of wastage, while units were in barracks. Their numbers, however, promptly increased when the units went on training or manoeuvres.

Warts were common. Molluscum contagiosum was occasionally seen and the incidence of keratodermia blenorrhagica has been discussed with Reiter's disease.

*Seborrhoea was very common. If the hair of the head had been kept shorter, this source of wastage would have been reduced.* Hyperidrosis of the feet was a frequent excuse to report sick.

The most frequent cause of urticaria was penicillin treatment. Treatment was also the most frequent cause of contact dermatitis. Very frequently a prolonged stay in hospital resulted from treatment with sulphadiazine powder or cream, penicillin cream and the too frequent application of benzyl benzoate emulsion.

The incidence of textile dermatitis remained steady. If the patient did not become desensitized in six weeks he was sent to England. Dermatitis due to contact with petrol and diesel oil was not common.

Psoriasis had a steady and relatively frequent incidence, as male adults with this condition are not excused National Service. It was sometimes seen in a very acute generalized form.

Pityriasis rosea had a steady, seasonal incidence.

During 1947 there was a considerable incidence of dermatitis due to a return to arsenical therapy in the treatment of syphilis. Dermatitis was seen that varied from erythema to severe exfoliation in 29 cases. There were fortunately no deaths amongst these 29 cases. In the treatment of these cases B.A.L. (British Anti-Lewisite) may have been of some slight assistance where the condition developed before the sixth injection of arsenic. The main
factors in their recovery was the very great care and devotion with which they were nursed. Intramuscular penicillin is assumed to have protected them from secondary cutaneous and lung infections. Blood proteins and chlorides were found to be very depleted in these cases. Where indicated, plasma was given by intravenous injection. Extra sodium chloride was given by mouth, when necessary, intravenously. The use of sodium chloride was controlled by the quantitative estimation of urinary chlorides (Fantus, 1936).

In 4 cases arsenical toxicity took the form, after their course of treatment had been completed, of hyperkeratosis. This was most marked in the skin of the palms and soles.

Cases of erythema nodosum were examined and kept under observation in an endeavour to obtain evidence of lung tuberculosis.

In 1947 a patient (F., 23) was recalled, a month after discharge from hospital, for a repeat X-ray examination of her chest. An area of infiltration, due to tubercle, had become visible in her lung fields.

In 1949 three cases had had erythema nodosum, during the year showed X-ray evidence in their lungs of infection with tubercle. One of these was a Norwegian soldier (23 years). In 1948 he had received B.C.G. immunization. In July 1949 he developed erythema nodosum. X-ray examination of his chest was positive for tuberculosis. His sputum was negative for tubercle bacilli. Blood sedimentation rate (Westergren) was at 1 hour, 6 mm.

(18) Generalisations

During the four years covered by this review acute poliomyelitis and infective hepatitis were in evolution and establishing themselves in their human host.

Diphtheria and infections mononucleosis were in devolution.

The balance of lung tuberculosis had been upset during the war and it was still tending to gain on the community.

Syphilis, profiting by the opportunity of war and disturbed social condition, did not appear to vary the course that it has followed since Pavia. It gained on the community and again became a killing disease. Those that controlled the use of penicillin were able to limit its ravages amongst themselves. With a wider application, it could still further have reduced human misery and suffering.

(19) In Conclusion

The British Army of the Rhine has, so far, during my working life, been called into being in 1919 and in 1946. The diseases encountered have been recorded here.

Baron Larrey has left a record of the effects of cold and starvation on the Army under French Command, mainly Prussian, that invaded Russia in 1812 (Mercer, 1832).

As the same dismal record of suffering was again experienced by members
of the same nation in the winter of 1941-42, an addendum on the causes of medical wastage, in the German Army, in Russia, during that period is attached.

(20) ACKNOWLEDGMENTS

“A centre of acute medicine that I know I shall not see again” (Bulmer, 1945).

This paper is a record of the work of the physicians, psychiatrists, pathologists, dermatologists and venereologists who worked in the B.A.O.R. from 1946-49. The majority of them have returned to civil life and the military phase of their life’s work is here recorded—not without pride.

Their Consultant learnt a great deal from their devoted work.

This work was at all times facilitated by the Directors of Medical Services, B.A.O.R., Major-General Sir Edward Phillips, K.B.E., C.B., D.S.O., M.C., and during 1949 Major-General F. R. H. Mollan, C.B., O.B.E., M.C.

ADDENDUM

By November 1941 the time programme for the invasion of Russia had not been maintained. There had been no provision for a winter campaign. It is stated that Field-Marshall von Brauchitsch advised Hitler to consolidate the position gained by the German Army and to retire behind the line of the river Dnieper.

This sound tactical advice was not accepted. The winter of 1941-42 in Russia and Germany was unusually severe and April 1942 found the Army under German Command in Russia—composed of Germans, Ukrainians, Hungarians and Roumanians reduced by two million men. Of this number roughly a million were dead or had suffered amputations, which rendered them unfit for further military service.

This unnecessary wastage sapped the strength of the German Army more than any subsequent loss in battle.

The conditions that caused this loss were frostbite, exposure to cold, rheumatic fever, pneumonia, infective hepatitis, typhus fever, bacillary dysentery and malaria. To a lesser extent malnutrition played its part due to the scorched earth policy of the retreating Russians and the activities of by-passed islands of Russian troops and partisans.

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