A NOTE ON A DISINFESTATION PLANT USED IN A TYPHUS HOSPITAL FOR PRISONERS OF WAR IN GERMANY.

BY

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This note describes a static disinfestation plant which was used in a prisoner of war hospital in Germany during the typhus epidemics which occurred there between 1941 and 1943. The hospital in question was the Reserve Lazarett für Kriegsgefangener set up at Egendorf, Thuringia, in a former Hitler Youth training school, and opened for prisoners early in 1942. With the arrival of the Russian prisoners of war in 1941 typhus broke out in a number of prisoners of war camps and working centres, and spread to prisoners of other nationalities, as well as to members of the Wehrmacht. Apprehension of the danger of a major epidemic decided the German authorities to open a number of fairly well-appointed typhus "Lazaretten" for prisoners, for many of whom hospital accommodation and treatment had hitherto been conspicuous by its absence or deplorable inadequacy. After the epidemic had subsided the hospital was used for general medical cases of British, French, Russian, Serbian and Belgian nationalities, and was staffed by captured R.A.M.C. officers and personnel. The strict disinfestation discipline for all patients admitted was, however, maintained by order of the German Medical Superintendent. The medical personnel, who were all young, had been immunized by anti-typhus inoculation. The apparatus installed and the technique which the German authorities recommended aimed at providing an absolutely safe method of hospitalizing a vermin-infested population in an area where typhus was epidemic or sporadic. In the following paragraphs a description is given of the installation and of the ritual carried through when patients were admitted.

The disinfestation centre occupied one corner of the ground floor of the hospital and consisted of seven rooms and a central passage leading from the hospital corridors. The only entrance through which patients could reach the disinfestation room was separated by barbed wire from the remainder of the hospital compound, and no new arrival was ever admitted, whatever his complaint, by any other route. Passing through this yard the patient entered the "dirty room" adjacent to the "clean room" with which it connected only through the two disinfestation cylinders, one steam and one hot air. The patients' bathroom was separated from the bathroom for personnel by two double gutters full of disinfectant. The bathroom was kept flooded over with disinfectant and was surrounded by a single gutter, while the baths themselves stood in sunken troughs, also kept flooded with disinfectant.

The staff required to carry through the ritual was one medical officer and three orderlies, who were distributed as follows: one in charge of the shaving and disinfesting room, one in charge of the patients' baths and one in charge of the undressing room.
Laundry -- Yard

Shaving and disinfecting room

Cupboard for disinfectants

Hot air and steam disinfectors

Shaving machine

Table for instruments with lamp

Clothing store

dressing room

Passage

Double gutter

Single gutter

Sunken trough for baths

W.C. for personnel

W.C. for guests

Baths and showers

Wash sink

Pressing room for personnel

Tub

Patients' laundrom

Passage to hospital

Section of double gutter

Spieg room

Yard

Laundry

Patients' entrance

Clean room

Disinfecting room

Wash basin

W.C. for personnel

Shelving
When the arrival of a patient was announced in the hospital the following procedure was strictly followed. The orderly medical officer and two duty medical orderlies proceeded to the dressing room for personnel where they stripped completely and dressed only in a one-piece canvas typhus suit and wood and canvas clogs proceeded through the patients' bathroom to the shaving and disinfecting room. The German canvas typhus suit was in one piece with a hood for the head, leaving only a space for the eyes, and each sleeve covered the hands, leaving a separate space for the thumb but not for each finger. The pattern differed from the type of suit recommended by the Ministry of Health. The latter had a separate head-piece and the arms ended at the wrist so rubber gloves were used extending to the elbows, with rubber Wellingtons up to the knees. The German type guarded the mouth and could be pulled over the nose and tied behind the head, and everything was enclosed in one piece.

The disinfecting and undressing room and gutters were flooded with lysol or cresol by the duty orderly who then brought in the patient and made him undress completely and give up all his small kit and clothes for disinfection. These belongings were then all placed in the hot air disinfester for treatment, except for photographs, watches, fountain pens and food. The patient then stood naked in the disinfecting room and was inspected by the duty medical officer in the light of a bright lamp. This inspection included examination of the nose and ear passages. The orderly then proceeded with razor and barber's clippers, kept on the table in lysol, to shave all the patient's hair from head, axillae, groins and abdomen, and perianal region, and to cut his nails short. While this was going on the medical officer syringed the patient's ears and nasal passages with a solution of zephyrol kept ready in the cupboard. If the patient was too ill to stand he lay naked on a stretcher while he was inspected and shaved. All hair was burnt immediately in an iron stove.

When the medical officer was satisfied, after his final inspection, that there were no lice the patient was douchted with zephyrol from head to foot, and cuprex was applied to groins, axillae and head, and thereafter he stood naked for twenty minutes. The disinfecting room was kept very well heated. When the medical officer had completed his duties and carefully discarded his typhus suit and wood and canvas clogs which were then added to the patient's clothes for disinfection in the cylinders. Carefully avoiding the sheet on the floor of the undressing room on which the patient stood to be shaved, he then proceeded naked through the patients' bathroom to the bathroom for personnel where he took a hot bath with carbolic soap and returned to the dressing room for personnel where he had left his clothes. In the meantime the duty orderly in the patients' bathroom supervised the patient's carbolic bath and shower. As all lice were now removed and as the danger of inhalation of dirt containing Rickettsiae from the patient was removed by the douching with zephyrol and cuprex, this bathroom orderly
was dressed only in a pair of shorts and did not wear a typhus suit. He was strictly forbidden to enter the undressing and shaving room.

After the patient had passed through the ritual of shaving, inspection, soaking in zephyrol and cuprex, carbolic bath and shower, he was dried and given a towel, a clean hospital shirt or nightgown, a blanket and clogs, and passed across the passage to the clean dressing room where he waited to enter his hospital ward. Any patient who was too ill to stand was treated throughout the whole ritual on a stretcher which was placed on supports underneath the showers.

The medical orderlies then discarded their typhus suits and clogs, which were disinfested in the boilers, and took carbolic baths and showers. Before taking their baths, however, it was the duty of the orderlies to clean down the undressing room and shaving room with a hose and brush, after burning all hair and soiled dressings; while the bathroom orderly cleaned the bathroom in the same way.

The sheet on which the patient stood, together with the patient's towels, were soaked overnight in a large tub of cresol and then boiled in a special boiler in the outside laundry, after which they were transferred to clean water and reboiled.

The patient's clothing was recovered next morning through the door of the clean room and taken up to his hospital ward.

In practice the hot air disinfestation cylinder was used as the steam had a damaging effect upon leather equipment, etc. The clothes were placed in the hot air cylinder at a temperature of 70° C. (158° F.) and were recovered next morning via the opening into the "clean room."

There was, of course, no D.D.T. or A.L. powder available at this time. Zephyrol is similar to the I.C.I. disinfectant and cleaning agent C.T.A.B.

It is believed by the hospital authorities that the method conscientiously used, provided a "foolproof" technique for dealing with the hospitalization of a vermin-infested population. The system of double gutters and floors flooded with disinfectant makes it virtually impossible for a louse which falls to the ground to survive. A hospital is absolutely safe so long as no lice are admitted to the wards. Altogether only two cases of pediculosis were discovered in in-patients in the first six months and two more in the second six months (both patients with plasters). This gave a total of four cases of pediculosis in 1,904 admissions—a marked contrast to the frequency of pediculosis among the in-patients of another prisoner of war hospital in 1941 where there was no disinfestation plant.

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