A REPORT ON THE MUTILATED AND EVIRATED OF THE BATTLE OF ADOWA.

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(Concluded from page 506.)

THE second group of cases that struck my attention was that of the evirated. These, for the greater part white soldiers, were all privates or petty officers. When I arrived at Mas-sowah I found that so far thirty-eight such cases had been received into that base hospital. Of these one had died of typhoid fever; the remainder had all done well and been already shipped on to Naples. The medical officers who had treated them all agreed on one point—that, strange to say, all these unfortunates seemed calmer and more resigned to their sad lot than the sufferers from the usual gunshot wounds. None of them ever attempted or even spoke of suicide. Almost invariably this mutilation had been performed by that portion of Negus Menelik's subjects called Gallas, and with few exceptions had been performed in the following way: The sufferer was thrown and his knees held forcibly apart. The torturer would grasp with one hand the genitals, pulling them well forward, and with the sword would separate them freely on each side by two incisions meeting on the perineum. Then pulling well up the hold and cutting from below upwards, he would cut off the whole of the testes and penis, leaving a huge triangular wound, with the apex on the perineum and the base on the pubes. In few instances one testicle was left behind or the penis only removed, such incomplete mutilation being always the result of haste, the torturers having been disturbed by small parties of Italian soldiers. The object of such horrible procedure on the part of the Gallas was to bring this much-esteemed trophy to their women. Almost all the dead were evirated, and I have heard from various prisoners that they had seen these Gallas ride about, carrying their spears thickly studded with these disgusting and ghastly trophies. It is the opinion of many medical officers of the Italian Expedition that the Gallas performed such mutilation only on the dead, but I have made a particular and searching inquiry on this subject, and am quite satisfied that such is not the case. No doubt the greater part of the dead were evirated, but whenever the occasion presented itself for various Gallas to have a white prisoner, helpless either through wounds or fatigue, they particularly enjoyed to evirate him. If the unfortunate man made no resistance, all the better for him; if he resisted a few well-directed blows on his head with the butt of a rifle soon stopped his resistance. For every survivor after this mutilation, I have reason to believe, there must have been two who succumbed.

During my stay at the Asmara I saw three evirated, two whites and one black. The first of them (S.) was one of the 1st Battalion Alpini. His battalion began fighting at 9 A.M., and was halted under fire in a valley, then advanced on a hill under heavy fire. In little over a quarter of an hour the greater part of his comrades were killed. S. continued firing until he had finished all his rounds, then managed to get more from a mule carrying ammunition, and kept on firing until charged by mounted Gallas. He was thrown, but got up on his feet again, when a Shoan foot soldier knocked him down from behind with the butt of a rifle, and five or six Gallas pounced upon him. He resisted lustily, until a sword cut on his leg disabled him. They then stripped him of his clothing, and tried to evirate him. S. having gathered his strength, attempted a last violent struggle, but a hail of blows from rifle butts followed, and rendered him unconscious. When he came to, he felt a smarting sensation about the pubes, and looking down he saw blood squirting, and realised what had happened. The Gallas had left, and he had the presence of mind to drag himself where a pillaged pannier (*cofano*) of the medical service laid, and by means of the cotton wool strewn about the place, he applied a pad on the wound, and thus succeeded to stop the hæmorrhage. For six days he remained on the spot unseen, unassisted. A small brooklet to which he painfully

dragged himself supplied him with water, and a neighbouring field of capsicums, grown by the Abyssinians for their Berberi sauce, supplied him with a few green pods, the only food he had. On the seventh day he was seen and assisted by a wounded sergeant of the 3rd Company of the Alpini, and after great suffering and time, he managed to come to Adowa, where he was made prisoner, and three months after sent back to the Italian lines. When I saw him, in the place of the genitals he presented a healthy triangular granulating surface, as shown in Fig. 1, having all round signs of cicatri-

Fig. 1.

sation; the base of this was quite above the mons veneris, no hairy portion having been left; the apex extended down towards the perineum, and a little above it could be seen dis-

Fig. 2.

tinctly the opening of the severed urethra. S. could pass his urine freely and with a straight stream, no contraction of the mouth of the urethra having taken place, and retained complete control on his bladder. He seemed quite

resigned to his lot, felt no genital stimulus, and was only anxious to be sent home.

P. C., of Rome (Fig. 2), of the 8th Battalion Infantry, received six sword cuts on the head, of which one severed in two the auricle of the left ear, and another caused necrosis of the outer table of the left parietal bone. He states that the sword cuts rendered him unconscious, and on recovering his senses he found that he had been eviscerated. He also remained unaided for a week on the battle field, keeping life and body together by a few sips of water that he got from a rivulet. His case was very similar to the other—the same huge granulating triangular surface, with a sort of overhanging flap of skin near the base. The evil with him was that micturition was very difficult on account of contraction of the opening of the urethra, and that there was constant slight dribbling of urine. Maggiore Ferrero thought the case a suitable one for an autoplasmic operation, but C. had been so unnerved by his previous sufferings that he declined it for the present; so all we could do was to keep the urethra patent by means of bougies pending his removal to Naples.

The third case seen was that of a black soldier, T. M., of the 8th Battalion Native Troops. In retiring with the horse of his dead lieutenant he received a gunshot wound in his left arm, causing fracture of the humerus in the upper third. He fell, and some Gallas horsemen rushed on him and proceeded to eviscerate him. He was quite conscious, but offered no resistance for fear of being killed. In this case the penis only was removed. The scrotum and testes have remained intact. Asked if there was bleeding at the time, he answers that "blood flowed like running water." Asked if he had sexual desire, replied "No," and did not care for the company of women or men; wished only to remain alone. Amongst the whole lot of eviscerated who have turned up so far there have been only four blacks, one a Mahomedan, the other three Abyssinians.

In concluding these brief notes I wish to record the very perfect manner in which all the arrangements connected with the Italian military medical service have been conducted in this unfortunate campaign, right through the long line of operations, from Massowah to Kassala. No medical service was ever more sorely tried than the Italian in this expedition.

The base hospital at Abdel Kader near Massowah in February last had only three brick buildings capable of 300 beds. By the end of March, in spite of every endeavour to ship off to Naples all the sick and wounded capable of removal, no fewer than 1,700 patients, partly wounded, partly cases of typhoid and malarial fever, had accumulated in Massowah. All these, thanks to the forethought and activity of the principal medical officer, Colonnello-Medico Mosci, had found suitable accommodation. Ably seconded by the Corps of Engineers, the principal medical officer had got ready 18 huge wooden barracks, with double roofings, and so planned as to minimise, as far as possible, the intense heat at Massowah. Altogether the 21 barracks covered an area of a square kilometer, through which the railway line ran; so that the patients coming by rail from Saati were shifted straight away from the railway car into their bed. In spite of all this mass of patients thrown suddenly on the hands of the *Legione di Sanità Militare* (Medical Service), there never was lack of surgical dressings or drugs, either in Massowah or any of the other base or field hospitals; this notwithstanding the fact that all the ambulance material of Baratieri's corps had been seized by the Abyssinians at Abba-Carima.

I was fortunate to see at the Asmara the surgery done by Maggiore Ferrero, Captains Tavazzani and Mozetti, Lieutenants Martinelli, Lacava, and others, and the medical work of Captains Bozzolo and Schizzi. The skill, power of adaptation to unfavourable circumstances, attention and paternal devotion to their patients, whether black or white, and perennial good humour of these gentlemen, are beyond praise, and shall never be forgotten by me. Truly, considering the number of officers of the *Italian Servizio di Sanità Militare* who were killed or taken prisoners, and the excellent and abundant surgical and medical work done by it, both on the field where the Geneva Cross was a sign for bullets rather than for respect, and in hospital after, I believe that this corps have well deserved of their country, and are entitled to the good opinion of the ambulance services of all civilised countries.

FORMIC ALDEHYDE IN THE TREATMENT OF RINGWORM OF THE SCALP.

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THE intensely bactericidal properties of formaldehyde, not only in solution but of the vapour itself, coupled with its remarkable powers of penetration, suggested to me that in this substance we probably possessed a therapeutic agent of infinitely greater value than any of the antiseptic preparations which have hitherto been employed in the treatment of ringworm of the scalp. The experimental evidence detailed below would indicate that formaldehyde is not open to the vital objections which apply to nearly all the germicides in common use in this complaint.

EXPLANATIONS FOR THE FAILURE OF ORDINARY REMEDIES.

In the first place the agent never reaches the fungus at all, or at any rate only superficially-placed portions, as the masses of mycelial and conidial growth, deeply situated in the substance of the hair, and particularly in that part below the level of the scalp, are not affected by the application, be it ointment or solution. Such failure to destroy the organism results partly because the natural sebaceous secretion enwraps and protects it, but largely because the trichophyton filaments, being insinuated between the fibrillæ of the hair structure, are thus ensheathed by a sort of keratinous envelope. A second objection exists in the fact that the conidia, like the spores of bacteria, appear to be exceptionally resistant to ordinary germicides.

PARASITICIDAL AND PENETRATING POWER OF FORMALDEHYDE.

Pure cultures both of trichophyton megalosporon and microsporon are effectually killed by a short exposure merely to the vapour. Twenty minutes usually suffices to destroy the microsporon, though a rather longer time is necessary for the megalosporon, the difference being dependent upon the fact that the former species does not spore upon artificial media. The following observations distinctly indicate that the envelopment of the fungus either by sebum or keratin offers no pronounced obstacle to the permeation of the infiltrated hair by this drug. If the surface of an ordinary gelatin-culture medium be covered with a thin layer of oil or lanolin, and exposed to formalin vapour, the gelatin will become so changed that it can be boiled without fusing, just the same as if nothing had been interposed. Hairs epilated from the scalp, and subjected both to the vapour and to the direct action of the solution, showed very emphatic results. In all cases the hairs were previously examined microscopically (without caustic potash), and only those which were swarming with conidia were employed. In one series of observations sixteen hairs were laid in a capsule, and placed in a closed vessel containing the vapour derived from formalin-saturated wool. In half an hour they were removed, lifted with sterile forceps into maltose-agar culture tubes, and incubated. Growth occurred only from one hair, though every one of sixteen other affected hairs from the same patch, which were used for purposes of control, showed abundant growth of microsporon. It was subsequently found that if the stumps were moistened or laid on wet filter-paper during exposure, no growth ever occurred.

The following contrast experiments were also made: With hairs dipped for 5 minutes in 40 per cent. formalin, and kept under the fluid by manipulation with a needle, no subsequent growth could ever be obtained. Similar treatment for an equal time with carbolic acid, 1 in 20 (aqueous), glyc. acid. carbol. B.P., aqueous solutions of hydrarg. perchlor., 1 in 1,000, 1 in 200, 1 in 50, and alcoholic solutions, 1 in 250, seldom or never had the slightest effect in sterilising the hair, as evidenced by successful culture. The alcoholic mercurial solution appeared to be the most potent, but its action was inconstant and uncertain.

FORMALDEHYDE CLINICALLY.

Experience in actual practice has amply justified the expectations raised by such experimental results. Dr. Perry kindly allowed me to treat 40 cases of ringworm of the scalp from his out-patient department at Guy's Hospital. The preparation most used was Scheeling's "formalin" in full 40 per