care he has been hands over to him a letter for the ordinary practitioner, in which is outlined the treatment to which the patient has been subjected, and in which are mentioned any incidents which may have occurred in the course of the disease, with his views on the case. He may, if he deems it advisable, add an expression of his opinion as to the further treatment of the patient. This expression of opinion, however, should only be communicated in a letter addressed directly to the ordinary practitioner. The practitioner at the watering-place should, however, abstain (although strictly speaking he has the right of so doing) from giving directly to the patient a written consultation (opinion) as to the treatment to be carried out on his return home, a proceeding which would be interpreted as an attempt to substitute himself for the ordinary practitioner, or to ignore his colleague's opinion. Practitioners in watering-places (although here again they have the absolute right of doing the opposite) should never perform on their patients any surgical operations, except in cases of emergency.

5. If a patient is sent to a hydropathic establishment, in the absence of a practitioner attached to the place, the ordinary practitioner directs the treatment to be carried out. When a special medical man is attached to the establishment the relations which should exist between him and the ordinary practitioner are the same as in the case of practitioners at watering-places.

6. The same rules apply to the relations between medical electricians and the ordinary practitioner.

7. Specialists (oculists, laryngologists, etc.) should always request patients to consult them only with the approval of the ordinary practitioner, and if possible with a recommendation from him. The ordinary practitioner may simply require from the specialist his diagnosis and his opinion; the specialist should make all necessary examinations, draw up his consultation (opinion), and send the patient back to his ordinary medical adviser. On the other hand, the ordinary practitioner may hand over his patient to the specialist not only for a diagnosis, but in order that he may be treated for his local trouble. The specialist should carry out the necessary treatment, and should from time to time inform the ordinary practitioner of the course of the treatment, requesting his co-operation if necessary. When the local treatment is completed the specialist should not forget that his task is ended, and he should refer the patient to his medical adviser with a letter of explanation, or they should meet over the case.

8. The duties are the same in the case of a surgeon or accoucheur (gynecologist) who is called in by a colleague who exclusively practises medicine.

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

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DURING my period of attendance at the Hospital of Asmara (Abyssinia) I found two groups of wounded soldiers, somewhat at variance with the usual type of gunshot and cold steel wounds familiar to European military surgeons. The first group, a large one, was constituted by the Ascari, black soldiers in the Italian service, who, having been made prisoners by the forces of the Negus, had the right hand and left foot cut off; the second, a much smaller number of cases, was formed chiefly of Italian soldiers who had survived the complete removal of their genital organs. These two forms of mutilation are characteristic of an Abyssinian campaign, and I think are sufficiently interesting to make a brief record of them acceptable to your readers.

I found the former wounded lodged in an infirmary improvised for them out of three brick buildings erected for the purpose of cavalry stables. In the day time these unfortunates would come out to bask in the sun in the open square space between the three buildings, and it was an impressive sight to see all these fine black young men, about 300 in number, hopping smartly about on their right foot or sitting

down on the turf, every one of them presenting this peculiar diagonal mutilation, evidenced by the white bandaged stumps at the end of the left leg and of the right forearm.

The account given by them of how they met with their present condition is as follows: On March 1st, after the disastrous battle of Abba Carima, they were made prisoners. On the following day several of the Ras begged the Negus Negesti to have them mutilated, but Menelick refused. On March 3rd a great court-martial was held, and Mangascia Johannes, Ras of the Tigre, together with Queen Taitù and the Abuna Chagay, urgently pressed on the Negus that the prisoners as traitors should undergo the penalty of the *urusat*—that is, the removal of the right hand and left foot. The charge of treason could only have applied to those prisoners of Abyssinian origin, but in no way to fully one-half of the prisoners, who were either Arabs of the coast or Somali. These, all of them Mohammedans, never had allegiance, either political or religious, to the Abyssinians, and their only misfortune was the black colour of their skin. Menelick yielded to the pressure, and consented to the *urusat*. The execution took place at once, and not as usual by the hand of the executioner, who has a certain practice, but by that of soldiers. The unfortunate prisoners in the camps of the various Ras, Mangascia, Makonnen, Alula, Whoalleyay, Bathool Negus, and Techla-Highmanot, were dragged out from the tents and held by soldiers. The *modus operandi* was as follows: A soldier would pull strongly apart the right hand from the forearm in pronation, so as to put the skin and joint on the stretch, whilst another soldier, with a sweeping cut of the sword on the dorsal aspect of the wrist, divided the skin and tendons; then the first soldier would forcibly flex the hand over the forearm, and a second cut would open the joint; finally, the first soldier would extend the hand over the wrist, and a third cut, sweeping from below upwards, caused the hand to drop off. The same method was used with the foot.

When this sort of mutilation is adopted for the punishment of theft the sufferer is allowed to plunge the stump in boiling melted butter to stop bleeding, but with these prisoners this was strictly forbidden, and once the mutilation was completed they were freed and left to themselves. As a result a great many died shortly after from hæmorrhage. Many more crawled to the water of a neighbouring torrent, where many of the Mohammedans in despair drowned themselves in a deep water hole. Those amongst them who were able to bandage themselves with portions of their robe (*footah*) survived. For many days they lived on grass and water and what little food they could beg from the Abyssinian soldiers. When the news reached the Italian lines a great number of wives of the mutilated, with the speed of leg peculiar to these people, rushed to Adowa, and many of the survivors owe their life to the fact that for miles they were carried on the back by their wives to the nearest Italian outpost—a fine example of womanly devotion.

When brought to the various military hospitals they one and all refused any surgical attempt to improve the state of the stumps, and so remained all March, April, and May; their objections to operation were that any operation for the sake of obtaining a good stump would further shorten the limb, which would prevent them from walking well, and that if provided with a suitable prothetic apparatus, this would soon wear out in their rocky mountain wildernesses, and then it might be impossible for them to get it renewed. Thus they remained obstinate till the month of June, when, in spite of careful antiseptic dressings, it became apparent, even to themselves, that a large number of these stumps would never heal. However, to decide them it was necessary to issue a general order stating that any *ascaro* who would refuse to submit to the decision of the military surgeons would forfeit all claim to the gratuities that His Majesty King Humbert and various public subscriptions had provided for them. One case operated, all the others followed the example with eagerness. Within a fortnight 116 amputations were done in the Asmara Hospital, chiefly of the leg, as the stumps of the forearms were generally healing naturally. Considering the large number of other wounds still present in the Asmara Hospital, this lot of operations and dressings threw much extra work on the able hands of Maggiore Medico Ferrero, P.M.O. for the Asmara; of Capitani Medici Tavaz-

zani and Mozzetti, and their assistants. The greater part of these stumps had the malleoli still present, the cartilages had almost disappeared, and the whole of the denuded surface was covered with exuberant granulations, giving to the whole a club-shaped appearance. Above the raw surface there was all round a zone of cicatricial tissue, presenting already signs of contraction, and tending to increase the congested state of the stump. Maggiore Medico Ferrero, a capital surgeon, who for several years held the lectureship on operative surgery at the Scuola di Applicazione di Sanità Militare of Florence, decided to operate by the circular method, and with few exceptions all these cases were operated by that method. By so doing he claimed to satisfy the Askari in their desire to have the stump left as long as possible. Four more cases were operated at Massowah, and 22 at Keren. Not one death followed these 141 amputations, and fully 90 per cent. of these cases healed rapidly by first intention. The 10 per cent. that suppurated were generally the result of the impatience and restlessness of some of these black soldiers, who would not be satisfied unless they undid the bandage and examined the stumps for themselves.

Such good results were no doubt due to the simple and effective way in which antisepsis was carried out. With the exception of the carbolic acid lotion for the instruments, no other antiseptic was used but perchloride of mercury lotion of the strength of 1 in 1,000. All instruments were boiled twice a day to make sure. All the perchloride gauze used, both for swabs and dressings, was for further security boiled also. No other swabs were used but those made out of perchloride gauze, and these were touched only by the operating surgeon or his assistant. No other hand came in contact with them either for preparing or handling them. All ligatures and sutures, exclusively of silk, were boiled freshly. The dressings consisted of iodoform dusting, covered by boiled perchloride gauze squeezed out by the operating surgeon himself, and put loosely and freely over the stump, and over this a thick layer of dry perchloride cotton wool and a gauze bandage. The anæsthetic used was exclusively Merck's chloroform; and whether as a result of the quality of the drug, or the elevation (7,000 feet over the level of the sea), or the race, I have rarely seen patients take chloroform better and easier.

For the relief of the shortening a special apparatus was devised by Mr. Invernizzi, surgical instrument maker, specially sent here from Rome by the Italian Government. It is formed of a wooden foot, lined over with leather in the shape of a boot. To each side of this foot two supports of wild olive wood, 4 centimetres wide and $1\frac{1}{2}$ centimetre thick, are screwed on by means of two lateral screws. These are flat below and half round above, and to prevent any oscillation are fixed below the knee to a semicircle of steel. On the inside of these supports is a leather legging specially modelled for each individual, the whole being attached round the leg by four leather straps with buckles. The essential part of this apparatus is that for the object of avoiding a joint at the ankle, the sole of the foot is continuous and slightly curved from the heel to the point, forming a section of a circle with a wide diameter. In this manner, on walking, the patient steps first on the heel and rolls forward on the slightly-curved sole, ending the step at the point.

This apparatus is solid, light, and economical; so planned that the Askari not having steel rods or joints, can in the course of time easily substitute any worn-out portion, as they have in abundance wild olive wood and leather, and understand how to work these two materials. I saw many of them walk on this apparatus, and was pleased to see how well they could move on flat ground. On broken ground it is less effective, but that would happen with any other apparatus, and it will only be by practice and long adaptation that they will be able to use it well on all sorts of ground.

Of the 330 mutilated returned to the Italian lines, 189 of them had so far healed up that an amputation was not considered necessary. I was struck with the fact that almost all these cases were those in which the malleoli had been struck off by the sword. The covering of these stumps is very imperfect, only thin cicatricial tissue frequently breaking in the centre; but those people who are familiar with this mutilation say that these stumps turn out very well, are painless, and that it is possible for them to walk and run

on them. To obviate the shortening Mr. Invernizzi has prepared for them an apparatus on the same principles as the one for the amputated; only the wooden supports are hollowed out at the lower end, so as to make room for the peculiar club-shaped stump.

There are yet mutilated Askari turning up at the hospitals of Keren and Asmara every week, but, all told, it is reckoned by good authorities that out of the 1,500 mutilated of Adowa there cannot be more than 500 survivors; the remaining 1,000 succumbed either to hæmorrhage or to starvation and the sufferings that followed.

MEMORANDA: MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

HEMIPLEGIA AND ENTERIC FEVER.

SIR DYCE DUCKWORTH, in his lecture lately published in the BRITISH MEDICAL JOURNAL on the sequels of diseases, mentioned that "hemiplegia" was a rare sequel to "enteric fever." A well marked instance occurred in a patient of mine in the Station Hospital here. It appeared quite suddenly in the fourth week when the man was recovering from a sharp attack. It was left sided, and for some days there was complete paralysis of movement of face, arm, and leg. The face and leg muscles have now (two months after) recovered fairly well, but the arm is useless. There were no sensory symptoms, but his intellect was enfeebled for some days.

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AN OBSOLESCEMENT VARIETY OF CRETINISM.

CRETINISM is produced by lack of thyroid function in youth, and varies in proportion to the lack of function and to the degree of youth at which the lack occurs. One variety is embryological, due to thyroid non-development or partial development, and is analogous to any other malformation by deficiency, such as acardia, acephalism, anencephalism, absence or arrested development of testicles, ovaries, uterus, or any other organ.

A second variety is due to atrophy of the thyroid parenchyma, occurring occasionally after a serious illness in childhood, and analogous to the atrophy of the testicles after mumps.

A third variety is due to goitrous degeneration of the thyroid body. This third variety seems to be fast vanishing from this country, judging from its extreme rarity amongst the many scores of cases brought before the British Medical Association at its recent annual meeting. Nor is this to be wondered at, seeing that goitrous cretinism is most likely to occur in the worst breeding grounds of goitre (namely, in valleys where the right conditions for goitre happen to exist) and which are sufficiently secluded and benighted to induce frequent intermarriage among goitrous families. Improved sanitation and the opening up of secluded valleys will exterminate this variety of cretinism.

Half a century has not yet elapsed since Dr. Hugh Norris described the endemic cretins of the little Somersetshire village of Chiselborough, lying in a small valley hemmed in on all sides but the west by hills over 400 feet high, its temperature mild, its lower part damp and dirty, and its immediate neighbourhood densely wooded with orchards. In this small village of 540 inhabitants he found: (a) 4 goitrous idiots, 2 of either sex; (b) 16 goitrous imbeciles, 4 male and 12 female, all unable to articulate intelligibly, all with very bad memories, and all except one unable to earn a living; (c) 5 goitrous deaf-mutes, all females; (d) 200 or 300 goitrous villagers, with low intelligence and defective speech, the most goitrous being also epileptic.

The above creatures were stunted and thick-set, with large head, abundant coarse hair, low forehead, small sunken eyes, broad face with flat nose, large mouth with thick lips, and rickety limbs, the expression laughing or pained or vacant, the gait waddling. They were mostly weak, mild and harmless, and, if mischievous, only so from irresponsible ignorance.