

ON THE  
HEALING OF STUMPS  
ON OCCASIONS IN WHICH  
SURGERY WAS NOT EMPLOYED.

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THE following remarks arise out of the opportunity afforded me, when at Nipaul, of treating various individuals who had undergone the barbarous and severe mutilations so extensively practised in the criminal procedures of that country.

On the 3rd of September, 1831, the day of the jail delivery, among the numerous punishments which his *Honour* the Dhurmadhikar, or "owner of justice," had, *in the plenitude of his clemency*, ordered to be inserted in the criminal list, were eleven men sentenced to the loss of a hand. The crimes for which so severe a punishment was awarded were chiefly petty thefts, except in the instance of one prisoner, who was convicted of coining; strange as it may seem, this very individual had formerly suffered the loss of his right hand for a similar offence.

On the day of execution, with a view of giving all the assistance in my power to the unfortunate men, I commissioned a trusty servant to collect information respecting them, and, if possible, to trace them out, after they had received their punishment; and to inform those he might meet, that I would give them remedial aid if they would apply for it. The peculiar prejudices, however, of the Nipalese towards Europeans, render them at all times unwilling to seek advice from the residency surgeon, and it was not until the 21st of October, or forty-eighth day after the infliction, that my aid was solicited. On this day one of the sufferers presented himself for treatment, and a few days afterwards, I was visited by five others for the same purpose. From these individuals I collected the following particulars.

The prisoner, on being brought up in turn to receive his punishment, is placed on the ground, where he is secured by two persons, while a third firmly grasps the upper part of the fore-arm, having previously retracted the skin as much as possible from the wrist upwards. The operator (a man of the lowest caste, a sort of Jack Ketch of these regions) then proceeds with a large knife well sharpened, to cut through the integuments surrounding the wrist joint, at the same time carrying the incision sufficiently deep, to divide as much of the ligamentous structure beneath as he is able. The hand is then roughly, and

with considerable force, turned aside, and any remaining attachments are at once separated by the knife. Thus concludes the operation and the executioner's duty. The prisoner is then liberated, and left to his fate. The precise time occupied in removing the hand I am unable to say, though, from constant practice, the operators have acquired a notoriety for much dexterity in the performance of their barbarous office.

My first patient supplied me with the following particulars of the after treatment; which will serve as a general record of that usually practised. The moment the hand was detached, the sufferer firmly grasped the skin just above the bleeding stump, with the opposite member. By this means he contrived to maintain a sufficient degree of pressure for nearly two hours, so as to prevent any considerable loss of blood. About this time, two of his relations came to his assistance, and immediately removed him to a shed. When there, his assistants twisted some fine linen into a cord-like shape, which they bound with considerable tightness, commencing at the bend of the elbow, carrying it forwards as far as the edge of the stump, and securing it at that point, so as to prevent its becoming loosened. After this the stump itself was covered with a piece of dry linen, and the arm enfolded in a bandage of the rudest kind. For four days from this time the parts were not interfered with, and though the man said that the blood continued to ooze out for the greater part of the first three days, it is clear that the loss was inconsiderable, as it does not appear at any time to have occasioned syncope. On the third day some nostrum, in the form of ointment, was given to him by a woman (a practising physician of those parts), but as he experienced no particular pain or uneasiness at that time, the original dressings were left untouched till the following day. When these were removed all disposition to hemorrhage had ceased, and I conclude that the suppurative process had commenced, as the patient said that a yellow discharge was exuding from the surface of the stump. The ointment was then applied over it, some leaves which are commonly used by the natives to promote suppuration were placed on the part, and the bandages were altogether discontinued. From this period no unfavourable symptom appears to have occurred, and when the patient applied to me on the forty-eighth day the stump was covered with some kind of earth and had a dirty appearance. The application of a common cataplasm, however, soon cleansed the surface, when a healthy granulating sore was presented to view, and by persevering in the poultice, with occasionally, a stimulating application, the parts gradually healed.

It may be asked how it happened that the bandage was removed on the very day

that pressure was no longer requisite for the purpose of suppressing hemorrhage? I understood that the removal on the fourth day was purely accidental, simply arising from the circumstance of the woman presenting him with the ointment on that day. But for this the bandage would not have been removed, nor the wound inspected for many subsequent days. It must not, therefore, be supposed that the removal of the dressings on the fourth day was founded on any surgical principle whatever.

Of the remaining individuals who underwent a similar punishment, one died on the third day and nine recovered. Six of the cases I subsequently treated, and in all of them the stumps healed at about the tenth week, without a single circumstance arising in any one to render the cure protracted. It should be mentioned, that until I (by the kind indulgence of the resident) gave these poor creatures an asylum, they were all huddled together in an open shed about two miles from the residency, depending solely on alms for their support, miserably clad, and subject to every bitter evil which poverty and loss of caste could give rise to. It will scarcely be credited that at about the time that my patients might have been pronounced cured, a circumstance occurred to cause them to be hastily removed from the premises of the residency, no less than their being again at their old work, and implicated in a robbery at the house of a member of the royal family who lived hard by.

A year seldom passes without this punishment being inflicted, and I was informed that death rarely follows.

In a surgical point of view, the foregoing remarks are instructive, inasmuch as we learn from them that large arteries, such as the radial, ulnar, and interosseal, may be divided without fatal hemorrhage occurring, and with no better provision of art than the simple means adopted in these cases. I had been informed that a common method of arresting hemorrhage after amputation was to plunge the stump into boiling oil; but in these instances, at least, nothing of the kind was resorted to. In the six cases which fell under my immediate notice there was no dribbling of blood observed through the dressings after the third day, and although it is reasonable to infer that the previous and almost constant draining of blood from the wound, though not to any great amount, might be sufficient to interrupt the inflammatory process which supervenes in the coats of the vessels, it, nevertheless, would appear that the deposit of adhesive matter at their orifices is not driven off by the blood, but becomes organized with the tunics, so as to render the obstruction complete in the space of three days. Be it also remembered that the pressure required to suppress the hemorrhage in these examples is not so powerful as to interfere

with the curative process. Nor is it less worthy of notice, that when suppuration is fairly established, the swelling of the integuments is so trivial as not to require the patients to loosen or remove the cordlike bandage. In five cases this bandage was not interfered with until from the 12th to the 15th day.

The fact that the bleeding orifices of the largest arteries of the extremities can be successfully checked by means of pressure alone, is already known to some surgeons on the continent, though I am not aware that it has been taken advantage of by English practitioners. Dr. Koch, Senior Surgeon of the Hospital at Munich, has, for the last twenty years, never employed ligatures to arrest the bleeding from divided vessels after amputation. An assistant compresses the main trunk with his hand during the operation, and until the dressings have been applied. Then, instead of this pressure, a graduated compress is fastened by a bandage along the course of the artery. The patient is then removed to bed and watched by an assistant, who exercises a slight pressure with his hand on the stump as long as strong pulsations are felt in the part. This plan Dr. Koch has always found successful.\*

I do not know that this method has ever been adopted by English surgeons. If not, it is matter of regret, since the subject is full of importance, and has the advantage of being backed by the extensive experience (twenty years) of one of the most celebrated surgeons of Europe. So far as I am capable of judging, the results of these Nipaul cases go far to strengthen the belief that this plan of treatment is of sufficient importance to warrant deliberate consideration, since it obviates the pain and delay which frequently occur in securing arteries, and what is of still greater importance in the after treatment, the ligatures attached to the vessels would not be in the way to excite that irritation which their presence not unfrequently occasions, to the prejudice of the healing process.—*India Jour. Med. Science.*

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#### CONNECTION BETWEEN THE GENERATIVE ORGANS AND THE

#### ACTION OF CALOMEL.

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In the May and October numbers of the *India Journal of Medical Science*, we find the following correspondence:—

*To the Editor.*

Sir: No. 3 of your journal reached me yesterday, and I take up my pen to remark on the great coincidence of Mr. Campbell's

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\* Vide LANCET, No. 247, vol. 2nd, 1827 and 1825.—*M. J. E.*