

"stands the climate, and has to satisfy a medical officer that it is likely to do so. He has survived, being one of the fittest."

Under circumstances of climate exactly similar, individuals by reason of their different temperaments and constitutions, suffer in very varying degrees. There are people who do not feel heat, while others suffer intensely. There are some who sleep well in a hot climate, and there are others who suffer from insomnia, some grow fat (not always a sign of health), and others become thin. Some seem malaria-proof, others quite the reverse. In short, there are individuals, whether soldiers or others, who enjoy life and who flourish in an Indian climate, who like the life, and who would willingly remain, if sufficient inducement were offered. Such persons may be credited with more than the average *vis vita*, with prudence of life, and with freedom from disease. And they have learned how to take care of themselves, in the different circumstances Indian service involves. These are the men who are required as soldiers in India, and these are the men who are being constantly brought back to Europe, either as time-served soldiers, or when their regiment receives the order to return. Greater inducements should be offered to such men to extend their service. I suggest for consideration, the desirability of, as a tentative measure, the establishment of an European regiment in each army, into which only men qualified as above should be admitted. Service in such corps should be made attractive by free concessions in the matter of pay, pension, furlough, &c. Applicants would be required to pass the most thorough and searching medical examination. Temperament, constitution, previous disease, idiosyncracies, should all be investigated, and considered with reference to the present condition of all the organs. By idiosyncracies, I mean inability to take quinine, liability to action of the bowels from slight mental emotion, &c. I think it is almost certain that men so selected, might serve in India up to 45 years of age, showing much less sickness and mortality than any European regiment ever yet did. If such were the case it is evident that any extra expense would soon become the reverse. In the old Company's European regiments were found men apparently of higher birth, and certainly better educated, than the ordinary recruit. Whatever may have been their antecedents, they made good soldiers. They appeared to court obliteration in the shadow of the Indian European regiments. A similar class would probably be attracted to an Indian service regiment as proposed. The subject seems worthy of discussion in the *Indian Medical Gazette*, its readers being so well qualified to give opinions.

### WHAT CHANGES TAKE PLACE IN THE LOWER PORTION OF A SCROTAL HERNIAL SAC AFTER LIGATURE AND DIVISION OF ITS NECK?\*

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THERE seems to be a fixed idea amongst surgeons that in all cases of operation for the radical cure of hernia by the open method, the sac should be dissected out in its entirety and no portion left *in situ*: how or why this idea has come about, I am unable to ascertain. I am also unable to find any answer to the question at the head of these notes: one Calcutta surgeon gave me as his reason for always dissecting out the entire sac, that if the lower portion were left a condition would result very much resembling "congenital hydrocele," the difference being, of course, that the fluid of the peritoneal cavity would communicate with the remaining portion of the hernial sac and not with the *tunica vaginalis testis*.

In the following case, which I shall describe very briefly, I shall be able to show that the above given reason is fallacious, and possibly that the remaining portion of the sac, after undergoing certain physiological changes, may exert a beneficial and not a detrimental influence.

If I am right in my reasoning, I need hardly point out the advantages of leaving a large portion of the sac undisturbed.

The most tedious part of the operation is the dissecting out of a large hernial sac: "by leaving the sac the operation would be completed much more quickly and easily, and *ceteris paribus* with less danger to the patient. The dissecting out of a large sac is followed, in a great majority of cases, in spite of antisepticism, by very troublesome cellulitis of the tissues of the scrotum; by leaving the scrotal portion of the sac *in situ*, the cause of the above, *viz.*, the pulling and tearing of the scrotal tissues would be avoided, and hence no cellulitis would result. Again, I take it, that the less the spermatic cord is disturbed and pulled about, the less chance will there be for any damage to its component parts.

*Case.*—Govind Sahu, Hindu, aged 45 years, presented himself at my Khoorda Dispensary on the 7th of October 1890 for treatment.

He was suffering from scrotal elephantiasis complicated by a large inguinal hernia of the left side. The hernia was of 20 years' duration, reducible and, excepting mechanically from its size, gave him no trouble. The man was anæmic and troubled slightly with asthma, but being very anxious to be relieved of his troubles, consented to operation. Knowing the great mortality following the combined operation for radical

\* This paper has been placed at our disposal by the Inspector-General of Civil Hospitals for Bengal.—ED., I. M. G.



cure of hernia and removal of scrotal elephantiasis, and also being anxious to get an answer to the question heading this paper, I determined to divide the operation: first, taking up the hernia, and on a future occasion the elephantiasis.

Accordingly I proceeded to operate at once, performing the usual open operation, excepting that I only dissected up about one inch of the neck of the sac, ligatured it at the internal ring, and then excised the dissected portion below the ligature, dealt with the bleeding, which was free, from the cut end of the sac remaining, and then proceeded to bring the pillars of the ring and the sides of the canal together with stout catgut; only having an ordinary half-curved needle with me, this was not particularly easy of performance; in fact, the usual operation was performed, only that I left as much of the sac as possible undisturbed. The operation was completed in the usual manner: no drainage tube was used.

The remaining portion of the sac would be about the size of a large cocoa-nut. The patient was left in charge of Civil Hospital Assistant Mathur Mohun Ghose, and the after history of the case was one of uninterrupted recovery; the wound healed by the first intention, and the man was discharged cured in about three weeks, being told to come to me again on my next visit. On the 18th of December I again visited the Khooda Dispensary, and Govind Sahu again came to see me. As the result of my first operation, I found merely a linear scar marking the site of my incision, the inguinal canal and internal ring closed and firm, and a lump about the size of an orange just outside the internal abdominal ring, a very satisfactory result considering that the man had been hard at work for over a month without pad or truss and with a larger scrotal tumour which would tend mechanically to draw the pillars of the ring asunder. There was no semblance of a return of the hernia on coughing or straining. I now proceeded to remove the scrotal elephantiasis in the usual manner, and then with a certain amount of inquisitiveness to examine the condition of the left testicle and cord. The different portions of the testicle were differentiated and found unaltered, but immediately above the epididymis and attached to the anterior surface of the spermatic cord was a hard, firm body about the size of a lime, to ascertain the nature of this body, I made an incision into it and found it to consist of dense fibrous tissue, it was fairly vascular, and in order to stop the bleeding, I had to bring the cut edges together with a deep continuous suture.

The operation was completed "*secundem artem*:" the tumour weighed 19lbs. The man is now almost convalescent.

Now, to answer the question at the head of these notes,

I may first of all remark that ligaturing the neck of the sac does not cut off the entire blood-

supply from the lower portion, the latter having a definite supply, probably from adventitious twigs of the spermatic artery; an appreciation of this fact will help us to solve the problem of the changes.

First of all, the pressure having been taken away from the inner surface of the sac, it contracts: then there may or may not be oozing of blood into the sac, if there be, then this coagulates. After this there will be an exudation of plastic lymph and this will become vascularized. If clot be present, it will be absorbed, and then the plastic lymph will undergo organisation and be formed into fibrous tissue, all this time contraction going on as with ordinary cicatricial tissue, and finally as a result we get what I found in my case, or small ball of dense fibrous tissue.

In conclusion, I think that in all cases of scrotal hernia, certainly in those of any size, where the sac is not going to be used as a plug for the internal ring, as, for instance, in McEwen's method, the lower portion of the sac should be left undisturbed.

I cannot claim any benefit for the ball of fibrous tissue resulting but it is, at all events, harmless; much more than can be said for some of the cases of cellulitis which have come under my notice, both in my own and other surgeons' practice.

PURI, 20th January 1891. ✓

#### NOTES ON COCAINE OPERATIONS.

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WITHIN the last month two cases of cancer of the penis came under my care. Having seen Mr. Jordan Lloyd, of Birmingham, perform the operation of circular amputation of the penis with cocaine injection as the sole anæsthetic, I followed his method thus:—

The pubes and penis being shaved and cleansed and patient blindfolded, the skin on dorsum of penis is pinched up into a fold by thumb and forefinger of left hand, and the needle of the hypodermic syringe, loaded with freshly prepared solution of cocaine hydrochlorate, strength 10%, is inserted in the median line at position of incision, and passed as far as possible down one side of the penis, in line of incision, in the connective tissue between skin and body of penis and 2 minims of solution there injected, another 2 minims during its withdrawal, and another 2 at point of entrance of needle. Here the needle is not entirely taken out, but the point is turned under the skin and is pushed down the opposite side of the penis as far as possible and injection similarly performed. On withdrawing from this latter side, the needle again is not taken out, but the point pushed vertically downwards as far as possible in the direction of the under surface of the penis, keeping within the future line of incision, in-