

## CALCUTTA EYE INFIRMARY.

## SEVERE INFLAMMATION OF THE GLOBES CAUSED BY SUPPRESSION OF THE MENSES.

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SOVADEEMENE, a respectable native female, aged 16, was admitted into the Calcutta Eye Infirmary, as an out-patient, on March 26th, 1856. She stated that she had suffered during about a month, from pain in both globes and circumorbital regions, with much intolerance of light, a distressing feeling of tension, particularly in the left eye, etc. There was some hardness of the left globe; the right was of nearly natural consistence. In both, there was obscurity of the cornea and iris. The pupils could not be seen to act naturally. The anterior half of the left globe was unnaturally prominent. There was some conjunctivitis. The sclerotic zone was partial in the right eye; complete in the left. The aqueous membrane was hazy. Vision was very indistinct. She saw features with the right eye only; with the left she saw large objects indistinctly between her eye and the light. She stated that there was nothing to which she could attribute the invasion of the disease; and that her health was good.

Upon the supposition that the cause of the disease was cold or damp, or such as would be likely to induce aquo-capsulitis or hydrophthalmia, she was treated by active antiphlogistic remedies, leeches, blisters, purgatives; then by a little blue pill, and a mixture containing iodine and iodide of potassium, internally.

Some improvement took place; but there remaining after eight days a distressing sensation of tension and fulness about the eyes, particularly the left, both corneae were punctured near the sclerotic junction with a cataract-knife, and a quantity of aqueous humour was evacuated. Some relief was experienced from this, but the inflammation still remaining, local depletion was again used, and mercury given, with a view of affecting the system; at the same time the iodine was discontinued.

April 17th. The mouth became slightly affected. A slight further improvement again took place, but there still remained much tension, obscurity of the tumour, with marks of sclerotic inflammation. The plan of mild depletion and counter-irritation was continued: still no marked improvement took place. The left eye became rather more prominent. It now appeared from a closer investigation, during which the woman, speaking with reluctance of her bodily state, admitted that she had not menstruated for above eight months, that this condition was the only probable cause of so obstinate an affection.

May 8th. She began to take a mixture containing aloes, sulphate of iron, and gentian; a few days afterwards, calomel was given in addition, and she was directed to use nightly a hip-bath, containing mustard. The mouth became slightly affected, when the calomel was omitted from the tonic medicine. There was now a decided, although small, alleviation of the symptoms: she began to see the features of a person, as if through a thick mist, with the left eye, and tolerably well with the right; there was still, however, much tension, intolerance of light, lacrymation, and obscurity of the internal parts of the eyes.

June 7th. The case appeared stationary; the calomel had produced a slight effect for a few days; after which, there occasionally took place an aggravation of the symptoms. No menstrual discharge had appeared. The right globe was normal in shape. The left was unnaturally prominent. Attenuation of the sclerotic near the corneal junction was to be expected. The tonic medicine was continued, and calomel added, as before. In a few days the mouth became tender; about the same time, the prominence of the left globe and the feeling of tension in both began to diminish.

June 20th. At this date, the system became a second time affected by the mercurial; the menses reappeared, after about ten months cessation. From this time she reported that her sight had become much more clear, and that the feelings of tension no longer existed.

June 24th. There were no signs of inflammation present, and but little prominence of the left globe.

June 30th. No prominence of either globe was visible. Sight was much improved. The pupil was much less misty.

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The tonic medicine was omitted; occasional counterirritation only was applied. She was now in progress to be cured.

REMARKS. This case was peculiarly interesting, as the cause of a most severe and distressing inflammation, which was very obstinate, and threatened total disorganisation of the eyes, was for a considerable time not to be ascertained; and it is, I believe, very rare to find such serious effects arising from the only cause which subsequent inquiries proved could be reasonably assigned in this case—namely, suppression of the menses. The patient, a native female, in a respectable sphere of life, was exceedingly indisposed to answer any questions about her bodily condition; consequently, the disease was referred to the ordinary causes of inflammation, predisposing and exciting. There was nothing in her appearance to indicate any special cachexia or constitutional tendency to any particular form of ophthalmic inflammation. It was only when the obstinate nature of the malady became evident, that a more minute examination into the state of the menstrual function was thought necessary. It then appeared that a total cessation of it had taken place for about eight months; it was therefore naturally concluded that this abnormal condition of the all-important function, in the absence of any other cause, was the only probable solution of an otherwise unaccountable case. A considerable time elapsed still before any marked improvement resulted. It was evident that as long as the special constitutional ailment lasted, no material alteration for the better would take place, and that the treatment, which was adapted rather to remove the general than the local disease, would only be palliative as regarded this local affection; it became probable that unless a healthy condition of the menstrual function could be brought about, total disorganisation of the eyes would result. Slight mercurial action, combined with a tonic treatment, seemed to have a favourable effect upon the local disease by producing a slight alleviation of symptoms; but the improvement was not progressive, and the menses still did not appear. The alterative and tonic treatment, which was continued, not producing any marked effect, and local disorganisation becoming daily more imminent, calomel was tried a second time; and fortunately, very soon after the second mercurialisation, the menstrual function was restored; and it may be presumed, as a result, of a perseverance in the stimulating treatment, and more especially in the use of mercury. This was followed by a rapid improvement in the vision and in the condition of the eyes; and at the last report, there was every chance of a permanent cure being obtained. This case, besides possessing several points of interest, shows the absolute necessity of our looking out, in all obscure cases of eye disease, for some constitutional derangement as the real cause. We shall often find, as in this case, that a morbid condition, which might be looked upon as a remote or predisposing cause only, is quite enough, without any special exciting cause, to keep up the disease; and that we must direct our attention principally, if not solely, to remove that condition; and that, until that is done, no treatment of the symptoms merely will suffice to cure or to give effectual relief to the disease: in fact, we must look upon the local symptoms just as we would in a case of small-pox, or the ulceration of secondary syphilis, etc., as merely a local manifestation of a constitutional disease.

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## Original Communications.

## ON DISEASES OF JOINTS.

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## VII.—DISEASES OF THE SPINE.

THERE are two morbid conditions of the vertebral column to which I would call attention, as deserving more careful consideration than has heretofore been bestowed on them.

1. Excessive pliancy or mobility of the spine.
2. Excessive rigidity.

1. Of the former we unfortunately possess few pathological specimens to illustrate its causes. It occurs for the most part in growing young girls of light complexion, blue-coloured eyes, auburn hair, and often of precocious intellect; the menstrual function is tardy and insufficient; there is general want of

muscular tone, and the patient, complaining often of fatigue, shows an inclination to rest in the recumbent posture. It not uncommonly happens that inframammary pain is experienced; that the hands become cold and numb; and that the lower extremities have diminished power. A fulness of the right shoulder is noticed; and, upon examining the spines of the vertebræ, the surgeon will readily detect the deviations from the normal form.

The curvature generally commences in the upper dorsal region, and extends directly to the right in one even sweep up to the junction of the lower dorsal with the lumbar vertebræ; there the direction of the articulating surfaces is altered, and the movements of the spine change from the lateral inclination to the antero-posterior movement, as in springing; a second curve then forms in this lower region to the left, accompanied with a rotation and twisting of the vertebræ, which is not uncommonly accompanied, from pressure on the spinal nerves at their emergence from the intervertebral foramina, by neuralgic pains extending towards the crest of the ilium.

Now, the error of assuring the friends of a young patient in such a condition that she will "grow out of it," is daily more known. The serious nature of the affection is better understood. But the surgeon should be somewhat guarded against giving too favourable an opinion as to recovery. It is true that he may, by firm pressure with his hands, easily restore the proper figure; the same result will ensue from the application of a well adapted apparatus. But the most constant supervision is necessary; for the spine seems so pliant as to slip, as it were, from the pressure of the pads, and to acquire curves in other directions. We may succeed in putting the yielding vertebræ straight with the hope that they will remain so; and yet a few days after, upon re-examining the back, the curves have reappeared, and the whole work has to be recommenced.

I need not say that this is a very different condition from that of a vertebral column, inclined in a moderately firm curve to one side from some peculiar occupation. In such cases steady pressure at one spot will effect more or less benefit. The pliancy in the former case seems in great measure due to relaxation, especially of those ligaments of the spine which bind together the articulating processes, coupled, perhaps, with a less perfect development of the vertebræ by which their mechanical locking is effected. A few months inattention to this state will often lead to changes which are irreparable. Bouvier, physician to the Children's Hospital, Paris, has published a volume of plates in which the visceral displacements common to cases of confirmed lateral curvature of the spine, are carefully delineated.

Plate x. exhibits what he calls *le premier plan*. The lungs are not apparently much deformed when viewed anteriorly. But the right is reduced in height, its base being pressed by abdominal viscera; the left has its inferior lobe compressed between the ribs and the heart. The heart is voluminous, and closer than natural to the ribs of the left side. The liver is much deformed, deeply fissured, and, as it were, mounted (*à cheval*) on the crest of the ilium. The inferior extremity of the right kidney lies in the iliac fossa. The spleen is compressed between the lumbar curve and the left ribs. The vena cava inferior, and the aorta follow the curvature of the spine. In another specimen, part of the lung was found compact and entirely deprived of air; the œsophagus was twisted in a manner similar to the great vessels.

One great argument for the necessity of early treatment is derived from the consideration of the changes which ensue in the vertebræ; not so much at that late stage of the disease in which the intervertebral substances are absorbed, and the consecutive vertebræ, with the ribs, are more or less blended by osseous deposits; but at a much earlier period, when, from the neck downwards, the antero-posterior axis of each vertebra appears to be altered. I have met with frequent specimens, and can testify to the great accuracy of Bouvier's plate (No. VIII), wherein such deviations from the normal form are represented, taken from the spine of a young girl aged fifteen years.

The difficulties which are so commonly experienced in inducing the friends of young patients to view the disease at its commencement in a proper light, is often overcome by their noticing the effect which it produces on menstruation. If the spinal curvature commence before the age of puberty, there may be no appearance of this important function. If it commence about that period, or soon after, the uterine discharge is insufficient and irregular, and often attended with pain. The relief afforded by proper apparatus is followed by immediate relief, and, in a few months, the usual unhealthy chlo-

rotic aspect, common to those so suffering, is lost. I saw a young lady, aged 14 or 15, last June, who was the subject of double curvature of the spine, that in the dorsal region considerably the greater, directed to the right. Menstruation commenced within one month after the application of a proper support, to the relief of many symptoms under which she had been labouring. I heard of her this month. The spine is now straight, and no further uterine irregularities had been noticed. These cases are so common that they would not have needed special notice but for the fact, that some of the patients had been subjected to other treatment, specially directed against the uterus, such measures being without avail.

2. Excessive rigidity of the spine occurs for the most part in aged persons, but it is sometimes seen in the middle-aged. A gentleman, under 40, consulted Mr. Tamplin, as he was anxious to get married. Upon being requested to sit down, he replied, that he was unable to bend the body in any way, and then it was discovered that the whole vertebral column was ossified into one piece. The osseous union of the vertebræ depends on two processes somewhat distinct. 1. Ossification of the connecting ligaments. 2. Union by osteophytes, or bony outgrowths. But it is common to see both these processes combined in the same subject.

According to Gurlt, the ossification of the ligaments is most commonly seen about the arches and processes of the cervical vertebræ; but there are many specimens in the different museums showing its occurrence along the course of the anterior common ligament. In these cases the vertebræ are unaltered in shape, while the usual ligamentous bands, converted into a smooth bony mass, still exhibit their primitive fibrous character. The changes here described have been noticed in the articulation of the ribs to the dorsal vertebræ. In the Museum of the Royal College of Surgeons of England, there is a preparation illustrating the osseous union of several dorsal vertebræ with their ribs. Four of the dorsal vertebræ are united by a thin plate of bone stretching over the intervertebral spaces on the right side. Three of the ribs of the same side are immovably fixed to the vertebral column by a prolongation of this newly formed osseous layer, and on the left side, two ribs are united to the corresponding vertebræ by a thinner process of bone. The intervertebral spaces are narrowed (No. 3379).

In the same collection there is a specimen (No. 3380, A), showing the complete union of all the vertebræ one with another and with the ribs; also union of the coccyx and sacrum. Here, however, there are bony growths extending from one osseous segment to the other. All the vertebræ, and with them all the ribs, are firmly ankylosed by osseous plates which extend over the articulation. By this extensive ossification the vertebral column has the appearance as if it were composed of a single piece. Only in a few spots in the dorsal and lumbar regions, spaces remain corresponding with the intervertebral discs; and in the upper cervical and lower lumbar vertebræ some openings are found which were once occupied by the ligamenta subflava. The intervertebral foramen are of natural size. The vertebral column has lost its normal forward curve in the cervical and lumbar regions, but it is not otherwise misformed.

Fleischman (*Leichenöffnungen*, Erlangen, 1815) relates a case of union of almost all the vertebræ from the lower cervical to the coccyx, in a man only 58 years of age; but here there was a severe posterior dorsal curve (cyphosis). Some of the vertebræ (*e. g.* the ninth and tenth dorsal) were fused into one piece.

Similar instances have been recorded by Connor (*Philosophical Transactions*, vol. xix; 1698, London), by Sandifort (*Museum Anatomicum*, tab. 61, sec. 4, No. 214), by Battersby (*Dublin Journal of Medical Science*, vol. xxiv; 1844), and others; and specimens illustrative of the same morbid changes have been taken from the lower animals, especially the horse and the lion. The Museum of the Royal College of Surgeons of England exhibits, in No. 3369, osseous union of the eight lower dorsal vertebræ of the lion. In 3370 a similar and more advanced stage of the disease between two of the dorsal vertebræ of another animal of the same kind. That such changes are due to chronic inflammation, probably of the character commonly termed rheumatic, there can be no doubt; but we have no well recorded observations of the symptoms in the human race indicating the commencement of processes which, whenever established, must be considered irreparable.