

opposite way, beginning the inoculations at the sides, where the ulcers will obtain a moderate size, and the organization in general at the same time will be influenced, there will be no development of such very large ulcers on the upper arms and thighs. As to phagedæna in the ulcers, I have never seen it since I adopted this way of proceeding, now about ten years ago.

There is another part of the body where the ulcers from the artificial inoculations will be still less developed than at the sides, and that is on the head; but, as a matter of course, I never tried the possibility of getting the inoculations to take for any number of generations in such a place. I only wanted to try if it were possible to inoculate the soft chancre on the head, which had been denied; but the experiments I made showed me that it may easily be done.

Another remarkable phenomenon produced by the artificial ulcers is, that indolent buboes can be developed by them. Thus, after inoculations on the sides of the chest, small indolent buboes will often appear along the margin of the pectoralis major.

It happens with not a few persons that the syphilitic matter will take far better on one side of the body than on the other, sometimes so palpably so as to strike the patient himself.

There are still more points with respect to the effect of the syphilitic matter to which I might call attention; but I am afraid of tiring my readers, and I therefore stop. I hope there can be no difference of opinion as to the importance the study of the influence of the syphilitic virus upon the organism bears to the therapy of the syphilitic disease.

In my next paper I will proceed to treat of syphilization as a curative method.

ON PELVIC ABSCESS AS A CAUSE OF HÆMATOCELE.

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It is well known that pelvic hæmatocele not unfrequently terminates in suppuration of the containing cyst and the parts immediately surrounding it, and subsequently in the discharge of the broken-up blood-clot mixed with pus. When such an abscess forms, however, it is secondary to and consequent on the previous hæmatic effusion. The following case seems to me to prove that the converse of this may occasionally happen, and that a pelvic abscess may of itself give rise to an effusion of blood, which, escaping into the cavity of the abscess, or into the surrounding cellular tissue, may with strict propriety be called a hæmatocele. I am anxious to put this case on record, as briefly as possible, since no mention is made of such an occurrence by any of our recent writers on the subject, and it cannot be unimportant to lay down clearly every possible mode by which a disease to which attention has but recently been directed may originate.

Mrs. McD—, aged forty-eight, came under my care on the 7th of March, 1865. She is a pale, sallow, and unhealthy-looking woman, who has passed the greater part of her life in India. She has had no family, and has ceased to menstruate for several years. I found her suffering from very characteristic symptoms of pelvic cellulitis, which had shown themselves after an accidental exposure to wet and cold. She complained of great abdominal pain and tenderness on pressure, especially in the right iliac region, where there was well-marked induration. Per vaginam the uterus was quite fixed, and pushed towards the left ilium; and the situation of the right broad ligament was occupied by a firm, hard, and very tender swelling, at no point of which fluctuation could be felt. There were also general heat of skin and feverishness, with a full, firm, and rapid pulse. Half a dozen leeches were applied to the right groin, followed by cataplasms, and she was ordered small doses of bichloride of mercury with quinine.

On the 10th of March a quantity of pure pus, unmixed with blood, was evacuated per vaginam, and this was followed by immense relief. On the next day the swelling in the right iliac region had nearly disappeared, the state of the parts per vaginam was unaltered, and the aperture of the abscess could not be felt. For three days pus alone passed from the vagina, but on the 13th of March there was a sudden escape of a large

quantity of dark-coloured blood, the coagulum of which I found to fill one-third of an ordinary-sized chamber vessel. Blood continued to run from her in considerable quantities, especially when she attempted to move.

When I saw her she was lying blanched and enfeebled, with a small, weak pulse of 112. The condition of things per vaginam was little altered, except that the swelling in the right broad ligament was considerably larger, pushing the uterus quite up to the left ilium, and that it had a more soft and boggy feel. The blood flowed freely during vaginal examination, but the aperture of exit could not be made out. In the central line of the abdomen there could now be felt a distinct ovoid swelling, with rounded margins, about the size of a small foetal head, and reaching half-way up to the umbilicus. This enlargement was quite distinct from the induration in the right ilium, and pressure upon it imparted movement to the uterus. The patient had a small fibroid outgrowth, about the size of an orange, on the left side of the fundus uteri, and the swelling was distinctly separated from it also. Ice was applied to the abdomen, the vagina was plugged, perfect rest was enjoined, with the administration of astringents, &c.

For some days little alteration took place, and blood, mixed with pus, continued to escape from the vagina in considerable quantities whenever the plug was removed. On the 19th of March a red, tender swelling began to form between the right labium and thigh, evidently the pointing of an abscess. On the 20th there was a large escape of blood from the rectum. On examination no aperture of communication with the abscess could be made out, and the induration and swelling remained undiminished in size. On the 25th her life was in imminent danger from the great debility produced by the constant draining of blood, which now came from the rectum only, and which was undiminished by any means we could devise, including the injection of solutions of perchloride of iron, &c. By this time, also, the external abscess in the thigh had been opened, and about a pint of pure pus evacuated. After the 26th the hæmorrhage ceased, and from that date she has steadily improved.

At present (April 14th), she is beginning to gain strength, although she is still very weak and feeble. The central abdominal swelling is much diminished in size, and is harder to the touch. The enlargement per vaginam is also less, and the uterus is beginning to resume its normal position. There is still a slight escape of pus, both from the vagina and rectum, but not from the aperture in the thigh, which has closed up.

Although the opening of bloodvessels into the sac of an abscess is a somewhat rare occurrence, still there is no doubt that it every now and then takes place;* and in all probability there are few situations in which it is more likely to occur than in the neighbourhood of the uterus, where one or other of the veins forming the utero-ovarian plexus might very readily give way, especially when they are enlarged and congested, as they are likely to be in cases of pelvic cellulitis. Bernutz believes that hæmorrhage never takes place from laceration or rupture of one of these vessels, except there has been previous evidence of their being in a varicose condition, which there certainly was not in this instance. It seems to me, however, difficult to assign any other source from which the blood was likely to have come, and I believe that here the effusion was in all probability extra-peritoneal. From the fact of a second and very distinct central tumour developing itself after the first escape of blood, it seems evident that the hæmatocele not only occupied the cavity of the abscess itself, but also filled a portion of previously unimplicated cellular tissue by the side of the uterus. It may be objected that this was from the first a case of hæmatocele terminating in abscess; and the symptoms of the two affections occasionally so closely resemble each other that such a mistake might easily be made. The fact, however, of pure pus being first evacuated unmixed with blood, and the hæmorrhage not occurring until several days had elapsed, seems to me sufficiently to disprove this hypothesis. This close resemblance in the symptoms of some cases of hæmatocele and pelvic cellulitis renders it not impossible that the sequence of events here narrated may have occasionally taken place and escaped attention. This would be especially likely to occur if the blood effusion, as seems more probable, had taken place before the abscess had burst or been opened; and some cases which I find recorded in recent monographs on the subject could very well be explained on this supposition. There would be nothing surprising in this to those who remember that the very existence of hæmatocele, now known to be by no means an uncommon affection, was not recognised until a compara-

* See Cooper's Surgical Dictionary, by Lane, p. 13.

tively recent date. The fact of the patient having ceased to menstruate for several years proves also that hæmatocele is by no means necessarily connected with menstruation, as some have thought. Indeed, if we extend the term to all cases in which blood is effused into the cavity of the pelvis, we must look upon the hæmatocele itself as a mere symptom of various distinct pathological conditions, some of which, as in this case, may be entirely distinct from menstruation.

Curzon-street, Mayfair, April, 1865.

CONTRIBUTIONS

TO THE

PATHOLOGY AND TREATMENT OF CERTAIN DISEASES OF THE HEART AND LUNGS.

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V.—ON CERTAIN FORMS OF HEART-DISEASE, AND THEIR LIABILITY TO TERMINATE IN SUDDEN DEATH.

THE disease of the heart which is most liable to terminate in sudden death is, undoubtedly, fatty degeneration of its muscular fibre. It is unnecessary to refer to statistics to prove this statement: the experience of most practitioners will confirm it. When fatty disease attacks the muscular substance of the heart, there is a gradual obliteration of its contractile element, and a gradual diminution of its contractile power. To such an extent does this sometimes take place, that, on making an examination of the tissue of the heart, we find but little evidence of its muscular nature; and we are surprised, not that death has occurred, but that life has been so prolonged. Death not unfrequently takes place suddenly in this disease without the previous occurrence of any well-marked symptom, such as to arrest the attention of the patient and warn him of his dangerous malady; and although it is probable that, in all such cases, a careful examination would reveal evidence of enfeebled heart, or of certain reflex phenomena, slight, but important in a diagnostic point of view, yet the absence of prominent features—such, for instance, as usually characterize the progress of valvular disease of the heart and of certain affections of its muscular walls—often leads the sufferer to imagine that no serious malady exists. And it is a circumstance of no little interest and importance that even when fatty degeneration of the heart is far advanced we occasionally find the pulse moderately full. I have known instances where this condition of pulse has misled as to the nature of the disease.

But beyond this question of the great liability of fatty disease of the heart to terminate in sudden death, there are some further points in relation to sudden death from valvular disease of great practical importance. Amongst these are—1st, *the probabilities of sudden death in valvular disease*; and, 2nd, *the particular form of valvular disease most liable to terminate in sudden death*.

In regard to the first point, I think it may be safely affirmed that, speaking generally, the proportion of cases of valvular disease terminating in sudden death is very small. In the large majority of cases death results slowly, from the secondary consequences of the affection, dropsy or some other diseased condition. Dr. Barclay has recorded a series of 79 fatal cases of valvular disease which occurred in St. George's Hospital. Two only of the deaths are mentioned as having been sudden. This proportion of sudden deaths is very small, and perhaps must not be taken as the usual one. My own experience certainly gives a larger proportion.

In relation to the second point, the particular form of valvular disease most likely to terminate in sudden death, I am not aware that any statistical tables exist which would tend to determine the question. It would be a matter of great moment, considering the strong impression which prevails amongst the public of the great liability to sudden death in heart-disease, if we could arrive at any precise conclusions in regard to this subject—if, in fact, we could by the examination of a large number of cases deduce a rule of probability applicable to

these valvular diseases. The experience of a single individual, unless extraordinarily large, would scarcely serve for any definite conclusions; but if a number of practitioners were to direct their attention to this particular point, the most valuable statistics might be obtained. Dr. Walshe, in the last edition of his work on Diseases of the Heart, has entered somewhat into this question, and he states that, according to his experience, the form of valvular disease most liable to terminate in sudden death is uncomplicated aortic regurgitation. On the other hand, Dr. Stokes is of opinion that mitral regurgitant disease is most liable to fatal syncope.

Theoretical considerations lead me to the conclusion that, of the two forms of disease just mentioned, mitral regurgitation is more liable to terminate in sudden death than aortic regurgitation. In the latter affection the dilatation and hypertrophy of the left ventricle are especially salutary. If the disease is chronic, the ventricle gradually adapts itself to its altered requirements, and, for a time, but few symptoms sufficiently severe to attract the attention of the patient may result. In consequence of its dilatation and hypertrophy, the ventricle is able both to hold a larger quantity of blood than in health, and to contract with greater power, so as to throw all its contents into the aorta. The arterial tubes thus become well filled by each ventricular systole—in fact, they receive more blood than when the heart is in a normal condition; but in consequence of the imperfect closure of the semilunar valves they lose a portion of this blood, and hence the sudden collapse of the arteries after their diastole, which gives so peculiar a character to the pulse in aortic regurgitant disease. Now, as the structures of the body get well supplied with blood *so long as the ventricle retains its vigour*, there is, speaking comparatively, but little element of syncope and sudden death. On the other hand, when the mitral valve is diseased, so as to allow of regurgitation, a portion of the blood which ought to go to fill the arteries passes back into the left auricle. Hence these cases are characterized by a small pulse—a pulse of little volume. If the amount of regurgitation is large, the quantity of blood passing into the systemic vessels will necessarily be small. Here we have the element of syncope; and, as the result of an unusually feeble contraction of the ventricle, or of some embarrassment to its action, sudden death may ensue. Whether such embarrassment is more likely to take place in mitral than in aortic regurgitation is a subject for careful study and observation.

On looking over the cases of sudden death amongst my own patients, I find that I have had about an equal proportion of deaths from the two forms of disease to which I have referred, and consequently my own experience tends neither to confirm nor to contradict the opinion I have expressed on theoretical grounds. The question is one especially for statistics, and it is chiefly with the view of eliciting facts, and the opinions of those who have had a larger experience than I have, that I have brought the subject forward.

My own belief is, that it is a very rare thing for valvular disease to produce sudden death, unless the muscular substance of the heart has undergone a weakening, or a degeneration of its fibre. As long as the muscle retains its vigour, the grand cause of syncope is wanting. In all cases of sudden death from heart-disease in which I have made a post-mortem examination, I have found fatty degeneration of the muscular fibre to a greater or less extent. The recognition of this fact is of great importance, as it points out the line of practice that should be adopted in the management of all cases of valvular disease.

Liverpool, August, 1865.

STATISTICS OF STRANGULATED HERNIA.

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STATISTICS of strangulated hernia being always of value, the following brief report of cases operated on by me at St. Bartholomew's Hospital, during the year 1864, may interest some of the readers of THE LANCET.

I operated altogether ten times—namely, on four females, the subjects of femoral hernia; on five males, the subjects of inguinal hernia; and on one patient, a male, the subject of both umbilical and inguinal hernia, in whom the exact seat of stricture was for some time doubtful. The youngest patient