SOME EFFECTS OF CHRONIC INTESTINAL STASIS ON THE FEMALE GENERATIVE ORGANS.*

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WHEN I was honoured by an invitation to deliver a lecture to you I chose as my subject the one that is at present uppermost in the minds of so many thinking medical men the world over. I refer to chronic intestinal stasis, and let me here state most definitely, so that I may convey no wrong impression, that by this term we do not imply simply an unsatisfactory evacuation of the contents of the lower portion of the bowel, which must of necessity be treated by colectomy or ileo-colostomy, but such a delay in the passage of the intestinal contents as results in the absorption of a larger quantity of poisonous products than can be satisfactorily dealt with by the excretory mechanisms of the body. It is impossible to consider so large a subject in all its aspects in the time at my disposal, so what I propose to-day to discuss is chiefly its gynaecological aspect.

For many years it has been an accepted creed that whatever changes might be taking place in the intestinal contents during their passage along the alimentary tract, the epithelial lining was quite equal to all demands that might be made upon it and acted as a definite barrier to the absorption of any of the harmful products that might be formed.

Yet, when we examine the accuracy of this in the light of the recent work of Sir Arbuthnot Lane, to whom we are indebted for all our knowledge of this subject, we find that such an idea is completely erroneous. As the result of a careful investigation of the facts that he has placed at our disposal we find that not only does absorption of noxious material take place from the intestinal tract, but that it is difficult to over-estimate the importance of this long-continued flooding of the various tissues of the body by such products absorbed from the several parts of the alimentary tract. This view is now supported by such a mass of operative and clinical evidence, which is open to all the world to see and examine, and has indeed been seen by practically all the greatest surgeons of to-day, as to be undeniable, and the basis of this master conception of disease stands established on fact. I wish to particularly emphasize this as it has been stated frequently and positively by those who have clearly not taken the opportunity of noting carefully the conditions that are found in the living abdomen, that the foundations on which this conception of disease is erected are not sure.

I shall endeavour, then, to show that it is no longer possible for us to consider many gynaecological conditions as separate diseases to be labelled by distinct titles and regarded as of entirely independent pathology, but that having masqueraded for so long in various disguises, they must now fall in line with the many other abdominal conditions whose primary cause is intestinal stasis. When it has been shown that in cases of stasis a marked absorption of undesirable material is going on from the alimentary tract, it is obvious that every single tissue and organ in the body must be affected thereby; the female generative organs are no exceptions, but are most definitely affected, not only by this long-continued absorption, but also by the mechanical factors that bring about the stasis.

In man the large intestine tends constantly to be displaced downwards. This is especially true in the female, owing to the wider pelvis and to the much longer abdomen, a fact of great importance that has apparently escaped the attention of anatomists. To oppose this displacement supporting bands develop, and they crystallize out along the lines of force. Apparently some observers have great difficulty in accepting this as a possibility. All are now agreed that this may take place elsewhere in the body, but it is still considered a heresy to introduce the principle into the abdomen. I have seen these bands in all stages of their development, from a slight thickening on the surface of the mesentery to a stout band that not only fixes the intestine, but by gradually embracing the circumference of the bowel

rotates it on its long axis and very definitely obstructs the passage of the intestinal contents.

The end of the ileum is frequently definitely affected in this way, and to this the name of "Lane's kink" has been given. It is urged that these bands are of congenital origin, and, with the object of inquiring into this point, I have opened and examined carefully at Guy's Hospital thirty-one fetuses. Their ages varied from 4 to 9 months, but in no case was I able to find anything that might be considered a true Lane kink. The congenital folds of peritoneum that are met with in the right iliac fossa of the fetus are entirely different from the typical Lane kink that develops during the lifetime of the individual. Again, in the left iliac fossa in the region of the ileo-pelvic colon, in no instance was I able to discover any thickening of the mesentery or adventitious bands. Here the development is much simpler, and there is less likelihood of confusing congenital and acquired conditions, and yet in the adult this is the point at which these evolutionary bands are most frequently found; and a careful consideration of the facts will, I think, definitely show that they are not congenital, but develop to oppose the downward displacement of the ileo-pelvic colon into the pelvis.

Confirmatory evidence of the accuracy of these descriptions is daily forthcoming, and I have recently had the privilege of looking through a most beautiful series of pictures representing these conditions, which came from the clinic of Dr. Bainbridge of New York. The drawings were of that high standard of excellence that one would expect from this surgeon, and some of them were reproduced in a recent number of the *BRITISH MEDICAL JOURNAL* (November 1st, 1913, p. 1129).

Whatever view be taken of the origin of these bands the effect they produce upon the bowel is most definite. Take, for instance, the band that develops at the end of the ileum. I have frequently observed it during laparotomy fixing the bowel at the pelvic brim, a greatly dilated flabby caecum occupying the pelvis together with a portion of the transverse colon and the lower coils of the ileum. The affected portion of the bowel is often not only fixed but rotated along its axis, so that a most definite obstruction is produced. Dr. Jordan has shown a delay in the transmission of the contents of a bismuth meal at this spot up to forty-eight hours. I have myself operated on a woman eight months pregnant with almost complete obstruction at this point, producing repeated vomiting and distension above the obstruction, which was relieved by merely undoing this kink. In the left iliac fossa the development of these bands is largely responsible for the many types of ileo-pelvic colon met with in the abdomen.

I have referred particularly to these two parts of the intestine because they interest us chiefly from a gynaecological point of view and supply a mechanical basis for several of the conditions that affect the purely female organs.

As a result of the mechanical obstruction thus produced a definite delay in the flow of the intestinal contents is brought about, and very definite sequelae result. The sequela that stands out as of paramount importance is that the small intestine becomes infected by organisms with which it cannot cope. Infection of the large intestine is of course the primary factor, its contents undergoing putrefactive changes due to the delay in their passage; but the large intestine is much more capable of dealing with its own infections than is the small, and the result is infinitely more serious when the latter becomes infected. Again, since it is from the small intestine that all the food products are absorbed, except water, its infection must be of the greatest possible importance.

Delay in the passage through the small intestine is produced in one of three ways:

1. By an ileal kink.
2. By an appendix, fixed tensely behind the ileum, which drops over it into the pelvis.
3. By what is known as a simple stasis, in which the patient has not reacted to form any acquired adhesion and there is no controlling appendix. The difficulty with which the ileum empties itself will be greatly increased by a caecum distended with stagnating contents and fully occupying the true pelvis, and the result of this must be an accumulation of its contents in which bacterial and

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chemical changes take place. It is clear, then, that although the stagnation of contents is primarily in the large intestine, it is the delay in the small intestine and the resultant infection of its contents that is of far greater import. It is on this point that we differ radically from the views expressed by Metchnikoff.

A detailed examination of patients suffering from marked intestinal stasis reveals a set of conditions that may be divided into three great groups: (a) The obstructive; (b) the degenerative; and (c) the infective group.

The Obstructive Group of Cases.

The obstructive group embraces those conditions that result mechanically from the obstruction of the intestine. An ileal kink or an appendix controlling the end of the ileum may produce a very definite obstruction, and behind it material stagnates. This will result in an obstruction at the end of the duodenum, so that it becomes very markedly distended. I have seen this distension on very many occasions, and on some of them the distension was sufficiently great to cause the duodenum to present through the wound when the abdomen was opened. It is clearly the antecedent condition of a possible ulceration and even perforation of that organ. This ileal kink is productive of a great deal of pain in the right side in women, and it is not rare to see such cases in which the appendix, or right ovary or tube, or even both ovaries, which admittedly showed no naked-eye lesion, have been removed, to the very serious detriment of the patient, by the surgeon in his attempt to deal with the pain. Some gynaecologists appear to regard the removal of the ovaries as a matter of no importance to the patient. I would most strongly oppose this, as the results are often disastrous to the future happiness of the patient both in her married life and in her mental condition. During pregnancy this kink plays at times a most important part; it is a fixed portion of bowel, and as the pregnant uterus rises from the pelvis into the abdomen and pushes up the abdominal contents, the kinking is as a general rule undone, and the beneficial results are obvious enough. On the other hand, right-sided pain is thus frequently produced, and a number of patients with this condition who have gone through a pregnancy have suffered very considerably from a pain which was doubtless due to this upward thrust of the uterus. Different degrees of obstruction will thus be produced, and the results vary in severity from an occasional attack of pain and vomiting to persistent vomiting in the later months. In cases of persistent vomiting of pregnancy which show no evidence of a specific toxæmia the cause of the vomiting and right-sided pain is often to be found in the kink of the ileum.

Again patients who present the type of simple stasis are often markedly benefited, and are never so well as when pregnant. The explanation of this is again mechanical: the uterus raises the intestines out of the pelvis and their drainage is very markedly improved.

In the left iliac fossa these adventitious bands are often the cause of much left-sided abdominal pain. This is such a frequent symptom in women as to be worthy of very careful consideration. I have seen several cases in which the left ovary had been removed with no relief to the pain, but to the greatest disadvantage to the comfort and well-being of the patient. The pelvic colon can be rolled quite readily under the hand, and tension on these bands produces the pain. It is produced whenever scybala pass along this portion of the bowel, or the part is distended with gas. This condition is frequently but wrongly attributed to ovaritis or salpingitis, but neither organ is in reality at fault. The pain may be considerably increased by the inclusion of the left ovary in the adhesions.

The Degenerative Group.

The degenerative changes are of equal interest and of much greater importance. They result from the action of material that is absorbed from the intestinal tract, and this action is but part of a general scheme whereby every tissue in the body is affected. Conclusive experimental proof of the truth of this has lately been afforded by the genius of Carrel, who has succeeded in growing living tissues, and finds that if their waste products are not removed the life of these tissues is short. If, on the other hand, the growing tissues are frequently washed and their

waste products removed, their life is very materially lengthened.

The breasts show these changes very definitely. As a result of the absorption from the bowel a condition is brought about that is clinically and microscopically indistinguishable from what is commonly known as chronic mastitis. Later this goes on to cystic degeneration of the breast, on which a cancerous change may supervene. If the evidence of this is asked, I reply that time and again I have seen it disappear after the short-circuiting or colectomy and the breast regain its normal consistence. I well remember a case which was sent into Martha Ward in Guy's Hospital, under Sir Arbuthnot Lane, for removal of both breasts. The hard irregular nodular lumps had raised the question of malignancy in the mind of an exceedingly able surgeon. The patient showed marked signs of intestinal stasis. The breasts were not removed, but an ileo-colostomy was performed. Within four weeks the change in the breasts was obvious to everybody who saw her.

A similar degenerative change takes place in the thyroid, an organ whose function is closely associated with the female generative organs. It shows very clearly the effects of chronic stasis, and rapidly degenerates and wastes. This wasting is easily determined by the finger. A more unexpected association has been found between the adenomatous degeneration undergone by the thyroid and chronic stasis.

A woman was taken into Martha Ward of Guy's Hospital with old, well-marked chronic stasis. She also had a large cystic mass in a lobe of the thyroid sufficiently large to raise in the anaesthetist's mind the wisdom of employing a general anaesthetic. It was suggested to the patient, therefore, that the thyroid mass should first be removed in order that the abdominal condition might a little later be attended to. This she refused to allow, saying that she had had it for many years and that she had come up for abdominal trouble. Consequently, ileo-colostomy was performed. She went out of the hospital some five weeks after the operation, wearing the same blouse as she had worn on admission. The thyroid mass had been reduced to a quarter its size and the neck of her blouse was now many sizes too big for her, and gave good indication of the degree to which the tumour had diminished in that short time. It has since completely disappeared.

Another sequel of the intestinal absorption is the loss of the body fat. This is an important factor in the condition we know as prolapse. The supporting tissues of the uterus share in the general degeneration of the tissues of the body, and the uterus falls back retroverted into the pelvis and on to the rectum, and so increases the difficulty of evacuating the solid material in this part of the bowel. Retroversion is the position of the uterus most favourable for the occurrence of prolapse, and should there be a lack of support from below due to an old laceration of the perineum in association with this degeneration of the uterine supports, prolapse will inevitably follow. It is this degeneration and laxity of the uterine supports and the surrounding tissues that so often provide the main difficulty in arriving at a completely satisfactory method for the relief of the prolapse.

This condition has frequently associated with it prolapse of the ovaries into the bottom of the pouch of Douglas, and the resultant discomfort is augmented by a chronic backache and dyspareunia.

The loss of elasticity of the skin, often so noticeable in patients with marked symptoms of stasis, may show itself in a very unpleasant manner during normal labour, in which there is no excessive size of the fetus, nor any contraction at the pelvic outlet. As the head escapes from the vulva during the process of extension, the skin, instead of yielding and gradually stretching, in spite of all care tears through like wash-leather, and a bad laceration results.

At the large number of operations for intestinal stasis at which I have assisted I have made a practice of systematically examining the uterus, ovaries, and tubes, and except when a secondary infection has taken place, I have found practically always a bulky, flabby, and retroverted uterus. In a certain number of the cases the retroverted uterus had been previously either suspended or fixed, with a relief to the patient that at best was very temporary.

This is an interesting fact, and shows clearly that to support the uterus by a suspending or fixation operation is merely to deal with a result of the stasis, and can only in these cases afford partial relief.

This position of retroversion is frequently associated with a chronic backache, the uterus falling backwards, the venous return along the vessels in the base of the broad ligaments is partially obstructed, and this leads to a continual congestion of that organ, with the result that a bulky uterus is produced and a condition of endometritis is brought about.

Retroflexion of the uterus is closely connected with this problem, and the constant straining during defaecation in a constipated individual whose involuntary muscle shares in the general degeneration of the entire voluntary and involuntary muscular systems must result in a bending back of the uterus. This is accompanied by an obstructive type of dysmenorrhoea. The condition is usually regarded as of congenital origin, but I am convinced that a large number of cases are not congenital, but are produced in the manner described. I was asked once to see a young woman who showed very marked symptoms of intestinal stasis. She was extremely constipated, and an unaided action of the bowels was always associated with marked straining and frequently with distressing pain. On this occasion she had collapsed with sudden pain during defaecation. On examination an almost complete obstruction was offered, on the introduction of a finger into the rectum, by a very tender lump that was quite fixed in the pelvis. Under anaesthesia the lump was found to be a bulky and sharply retroflexed and retroverted uterus which when replaced showed no other abnormality. The history of this patient exhibited dysmenorrhoea of the obstructive type, which was becoming increasingly severe and incapacitating.

The degenerative changes that affect the body tissues do not spare the uterus. I have already mentioned several instances in which the various tissues are replaced by fibrous tissue as a result of absorption from the intestine secondary to stasis. A ready example is the degeneration of the heart muscle that Mackenzie has shown to be primarily due to intestinal stasis. In the uterus this replacement of the tissues by fibrous tissue gives rise to a definite variety of fibrotic uterus. This is one of the most distressing uterine conditions, as it occurs only too frequently in youngish women in whom all less active means fail completely to control the haemorrhage, and in the end hysterectomy has to be performed. In the cases of this kind in which I have recently been compelled to perform a hysterectomy I have observed that there has been no ileal kink, but a marked stasis of the simple type, a distended flabby caecum occupying the true pelvis with coils of the ileum and a large part of the transverse colon in a similarly unsatisfactory state. I do not, of course, wish to include in this particular group those cases which are clearly the result of an infection of the uterine cavity that has spread to and involved the deeper planes of that organ. On the other hand, we know that the general resistance to organisms is very definitely lowered in cases of stasis, and we see how intimately associated is the condition of intestinal stasis with the production of a fibrotic uterus.

It has only been possible for me to outline briefly some of the effects of intestinal stasis. If the interpretation of the fundamental facts on which this superstructure is raised be true, and I submit to you that the evidence is overwhelmingly in its favour, then we have indeed been pointed to the greatest truth of modern times. The opinion on this subject of those members of our profession whose attention has been attracted to it has undergone a very rapid change. Nothing can better illustrate this than the Address in Surgery delivered before the Annual Meeting of the British Medical Association at Brighton by Sir Berkeley Moynihan. This surgeon, whose experience and world-wide reputation compel us to admit the weight and importance of any of his observations, now refers to Lane's disease as a clinical entity. It is a subject whose importance is vast, and as we ponder over it, its limits extend and carry us a long step backwards as we probe into the ultimate cause of things. It seems to me that many of those who are engaged in the branch of surgery that particularly interests me localize their view-point as they localize their surgical procedures, and

are all too ready to exclude from their observations primary causes of pelvic conditions that are to be found in the intestines, which they exclude from the field of operation.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF BRONCHIAL ASTHMA ASSOCIATED WITH PREGNANCY TREATED BY HYPNOTISM.

A YOUNG married woman, aged 25, had suffered from recurrent attacks of typical bronchial asthma for two years, latterly as often as once a week. The usual remedies had been employed, but without permanent improvement. The attacks were excited by the most trivial circumstances, especially by windy or foggy weather, and household occupations such as "washing" and "dusting" were impossible. Even between the attacks there was constant dyspnoea, and the patient was never able to lie down flat at night. In addition she suffered from various nervous phobias, such as fear of being left alone, fear of going out alone or going upstairs in the dark. She was first seen by me some six months ago during an attack of bronchial asthma associated with the usual distressing symptoms. She was at that time six months pregnant, was very ill and anaemic, and suffering from chronic laryngitis. The attack was relieved by the usual remedies, and passed off after a few days. I then decided to try suggestive treatment. She proved readily susceptible to hypnosis at the first sitting. At the second sitting, two days later, there was complete muscular relaxation and amnesia during the "sleep." Positive suggestions that the attacks would be less violent and less frequent, and would finally cease altogether were given from the first. Some explanation was given of the processes involved, and the complete cessation of the attacks was emphasized more and more as the treatment progressed. At first sittings were given every two days, and later once a week. She has been entirely free from asthma since the first interview, and has remained so up to the present time. She can perform her household duties and go out in all weathers. She is able, moreover, to lie flat at night, and the dyspnoea has entirely disappeared. The confinement occurred at term, and passed off without incident.

Whatever views may be held as to the precise etiology of bronchial asthma there appears to be a consensus of opinion as to its neurotic basis, and it would seem, therefore, to be an affection in which suggestive therapy would be helpful. The rationale of the hypnotic method can be stated only in the most general terms. Whereas the medicinal and prophylactic treatment usually resolves itself into diminishing the sensitiveness of the bronchial mucosa and avoidance or removal of all known exciting causes, the treatment by hypnosis simply presupposes a psycho-motor mechanism and utilizes it in securing a specific effect. Admittedly empirical in its application it would appear to be justified of its results. A remarkable feature in the present case was the complete cessation of the asthma after the first sitting and the continued immunity even during pregnancy and the stress of parturition. It may be mentioned that she dreaded the advent of her confinement, and in view of her history and debilitated condition I hardly expected her to get through the ordeal without a relapse. With a view to diminishing the risk of this as far as possible suggestions were repeatedly given during the course of treatment that she would have no fear whatever of the approaching event, but would feel a perfect confidence when the time came.

Another point I should like to emphasize was the extraordinary susceptibility of the patient to hypnotic influence. . . . The mere suggestion that after all her case might prove amenable to treatment had an astonishingly tonic effect. She had no hesitation about the treatment, but simply placed herself in my hands to do as I wished, and I am convinced that this complete passivity was the main factor in her recovery.

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