4. Radical Operations.

The radical procedures are those so strongly advocated by Lane, and are two in number. The first consists in short-circuiting the intestinal flow by ileo-colostomy. This procedure he employs in all cases of stasis which require operation, and in which the colon is not loose nor the abdominal wall lax. The ileum is divided about six inches above the ileo-caecal valve, and its proximal end implanted into the lateral aspect of the pelvic colon as low down as possible, and in all cases below the site of the last kink. Lane claims that "the last kink," if well developed, obviates in these cases the reverse flow of the intestinal contents up along the colon, which was the troublesome sequela of many of his earlier operations. If the last kink is not well developed, he produces one by suturing the mesentery of the colon above the anastomosis to the peritoneum over the pelvic brim.

The second and most radical procedure of all is complete colectomy. This operation Lane performs in all cases in which the whole colon is loose. In such cases the entire colon, including the hepatic and splenic flexures, is provided with a mesentery, and can be lifted out of the abdomen, making the performance of the operation safe and astonishingly easy. Personally I reserve these radical procedures for the cases in which I consider that multiple conservative operations (of course carried out at the one sitting) would not be effective, or in which the length of time necessary for their performance would endanger the life of the patient. My own opinion is that ileo-colostomy is not a good surgical procedure, and I believe that where conservative operations are contraindicated the best operation is complete colectomy.

In the performance of colectomy I use an extra broad crushing clamp (Fig. 8) specially made for me by Messrs.

Fig. 8.

Fannin. This instrument has blades 1 in. wide, and presses out laterally the muscular and mucous coats of the bowel, leaving the serous intact. A ligature is placed round either end of the crushed part and the bowel divided between. In this way the possibility of infection is reduced to a minimum and the invagination of the ends of the severed gut by purse-string sutures is rendered easy.

The patients after complete colectomy make good recoveries, put on flesh and gain better health than they have experienced for years; in fact, they derive the greatest benefit from the removal of their great bowel, which had lost its original function and degenerated into a cesspool, as tersely expressed by Lane.

From the foregoing it will be seen that in my treatment of these cases I have gradually felt my way up from the performance of small conservative operations to the adoption of radical procedures in suitable cases. The majority of my cases are too recent to allow me to judge of the final outcome, but the immediate results have been most satisfactory and encouraging. In those cases which have been operated on one, two, or three years ago, the improvement, which in some was very startling, has been maintained. The result of my experience has been to convince me of the importance of intestinal stasis, and I believe that here a great opportunity is presented to the surgeon for the relief and cure of much unnecessary suffering.

In conclusion, I would like to express my deep sense of indebtedness to Mr. Gray for coming over to address us to-night, and also to Professor Dixon for the facilities he most kindly gave me for the study of the intra-abdominal conditions in infants and fetuses.

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Remarks

ON

CHRONIC INTESTINAL STASIS.

MADE AT THE MEETING OF THE DUBLIN UNIVERSITY BIOLOGICAL ASSOCIATION, NOVEMBER 22ND, 1913.

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IN the consideration of the various aspects of intestinal stasis it will be of great advantage if we continually keep in mind their bearing on the question of treatment, which is after all the most important question—how are we to turn our knowledge, our discoveries, to the best advantage? We should always be asking ourselves, "Why, why?" or "How, how?" However hackneyed a subject is, however highly developed the technique of an operation is, we should always have the attitude that something more may be learned, some improvement can be made, which will redound to the better comfort or safety of our patients. I am glad that during recent years the feeling has been gaining ground that surgeons have, in the past, been doing too little for many of their abdominal cases, that the primary cause has been neglected in the presence of an assertive effect.

If the symptoms are not perfectly clear, it is due to the patient, when once he has submitted to operation, that a thorough intra-abdominal investigation should be made, and, if it is thought advisable, a sort of "spring cleaning" carried out, multiple operations should be done, so as thoroughly to break up the vicious circles which, as all of us know, abound in the abdomen. At the same time, the surgeon must be discriminating; there must be clear indications for interference; our desire to help must not allow our itching fingers to maltreat perfectly harmless conditions. What I say can be applied with great force to our subject to-night, and I think that there are still many points to be settled in connexion with intestinal stasis. For example, the treatment of this condition is by no means so straightforward or systematized as we are led to believe by Lane and his followers.

We must, in following up what has been mapped out so admirably by Mr. Pringle, discard from discussion all cases of stasis due to new growth, to the immediate or remote direct effects of inflammatory processes such as tubercle, dysentery, diverticulitis, and so forth, and to those other pathological conditions which cause constipation by a reflex influence, such as appendicitis, gall-bladder disease, or pyloric stenosis, and which are most satisfactorily dealt with by suitable and thorough surgical procedures.

There is also a small number of cases in which, either before or after death, no satisfactory explanation of the stasis is forthcoming. There is no stenosis, or angulation of, or other interference with, the bowel, so far as apparent to us, and yet the bowel has that dilated and possibly also hypertrophied appearance characteristic of cases in which real organic obstruction exists. Till better diagnosis and treatment are available, apparently nothing other than surgical remedies are of any lasting use in these cases, and even they sometimes fail to be permanent in their effects.

The discussion, therefore, is confined to the consideration of that large residue of cases of stasis caused by the presence of certain bands or membranes which interfere with the full action of the bowel. It is curious how many surgeons are still sceptical about the presence of these membranes. All one can say is, although their presence

may not be "well recognized," they are very easily recognizable. As Mr. Pringle has hinted, it is owing to a desire on the part of certain surgeons to procure uniformly good results—that is, if possible, a relief of *all* abdominal symptoms—and to a recognition of the far-reaching effects of intra-abdominal vicious circles, that the presence and importance of these membranes have been brought to light. It is curious how little notice of them has been taken in the past by anatomists and pathologists, who, one would have thought, with their greater opportunities, would have given prominence to them in their writings and teaching. I believe that 75 to 80 per cent. of all cases of intestinal stasis are due, directly or indirectly, to the presence of these bands.

As to the etiology of these membranes there is as yet no unanimity. There is a tendency for two schools to be set up. One, with Sir Arbuthnot Lane at its head, believes that these membranes are the result of the stasis. The other school believes that they are developmental in origin. Now, while I agree most heartily in all that Mr. Pringle has said about Sir Arbuthnot Lane's work—and I am glad that it is at last receiving something like adequate recognition—yet I could never accept his theories as to the origin of these membranes, and, after much consideration of the matter and study of the conditions found at operations, I came to the conclusion that the membranes were congenital, and gave voice to my opinions nearly two years ago. As frequently happens, workers in another country, Connell and Flint in America, were on the same track about the same time. I do not wish to fight about priority with such good men as these. I am sure we are on the right track. The more experience of intra-abdominal conditions I have, the more convinced am I about this, for reasons, some of which have been recapitulated by Mr. Pringle, and also because, like him, I have seen these membranes and bands repeatedly in fetuses. I have found them, well-developed, over and over again in young children. I have also very frequently observed them in adult patients, who have never in their lives suffered apparently in any way from them. How, then, can I make myself believe that they are the result of chronic constipation?

Still less can I credit the theory that they are due to long-continued inflammation. I thought this theory had got its quietus, but it has been revived again recently by Mr. Howell, of Cheltenham, in a paper,¹ "A clinical study of the chief function of the peritoneum," without, however, the backing of any conclusive evidence.

The study of the membranes found on the right side of the abdomen in a case of arrested descent and rotation of the caecum, which recently came under my care suffering from duodenal ulcer, will serve to illustrate the fallacy of any other theory than the developmental one. Ordinarily the caput caecum and ascending colon descend from under the liver to the iliac fossa and loin, and are fused, so to speak, to the posterior abdominal wall in these situations. The lower end of the ileum then enters the left or inner aspect of the caecum, and is otherwise free within the abdomen, except along its mesenteric attachment. The appendix lies usually to the lower and inner side of the caecum. One sees all sorts of gradations between this arrangement, which may be regarded as normal, and the abnormality which I found. From the study of abnormalities one may learn much. In my case the caecum was fixed under the liver in front of the upper part of the kidney. It had not rotated, so that the lower end of the ileum entered its posterior aspect. The base of the appendix had, with regard to the ileum and caecum, its normal attachment, but it was situated behind the caecum and its tip peeped over the colon in the region of the second portion of the duodenum. The caecum was bound chiefly to the posterior abdominal wall and partly to the under surface of the liver by a membrane which was continuous with and in structure was identical with the omentum, and of which it really formed the extreme right portion. The lower part of the ileum and its mesentery were loosely adherent to the posterior abdominal wall of the loin and iliac fossa. When the ileum was lifted up the most beautiful and extensive terminal ileal membrane which I have ever seen was made evident.

Suppose that this prematurely fixed caecum descended into its normal position in the iliac fossa, what would happen to these abnormal structures which held it in

position? The ileum would be partly pulled, partly pushed, inwards as the caecum came to occupy its position, and during this process the typical Lane's membrane would be formed; the ileum at the same time would be prevented from rotating into its usual position—it would be kept rolled downwards on its own axis, as Lane described it when first he drew attention to the condition. The caecum in its descent would draw out the part of the omentum which fixed it, and in its thinned-out condition this would form the filmy, more or less irregular, Jackson's membrane. The caecum also would rotate outwards as it descended (like the movement of everting the right hand), else the ileum would continue to enter its posterior aspect. In this, it will be observed, I disagree with Mr. Pringle's opinion of what takes place.

It will be noted also that the filmy Jackson's membrane differs much in appearance from the more fibrous terminal ileal membrane. They are derived from different kinds of tissue. I venture to point out that the rotation of the caecum sometimes does not occur although its descent is otherwise normal, and the ileum in that case enters its posterior aspect. I have seen this repeatedly.

The appendix may not descend, or do so only partially. It tends, seeing that it is most posterior in its primary high position, to become adherent first and to be more fixed than the other structures. It is frequently ultimately retro-caecal or retro-colic, its tip reaching even as high as the under surface of the liver. In an appendix which has succeeded in escaping from behind the caecum evidence is very frequently seen of the bonds which at one time entangled it, in the shape of a flat band of "adhesion," attached usually about its middle or proximal part, in which run the typical fine linear vessels seen in many of the other developmental membranes. This band is, I believe, a great predisposing cause of appendicitis.

I do not think I need say more about the etiology of these membranes. If they are studied the fact will be appreciated that they are all due to an excess of developmental fusion or to a deficiency of developmental absorption. Great variation in their arrangement will be found and in their effect on the motility and mobility of the bowel.

In dealing with the subject of intestinal stasis from a purely surgical standpoint, we must, at present at all events, look at it from the point of view of a man to whom sufferers from this complaint, with its numerous sequelae, come after having been treated in all sorts of ways, with only temporary relief or with none at all. They have had drugs administered to them by the mouth, by the rectum, or through the skin; they have undergone courses of ordinary enemata or of more vigorous douching processes; they have had abdominal massage and electrical treatment; they have drunk and bathed in the waters of various spas, and they may even have had vaccines or antitoxins of various kinds injected into them. The multiplicity of the remedies and the fact that the patient has so frequently perforce to discard one for another in order to provide a fresh stimulant for his jaded intestine show that there must be some factor at work which these remedies do not remove. They alleviate the stasis temporarily by stimulating a better tone of the bowel, or, by liquefying its contents, enable the bowel to act more easily. The cause of this so-called chronic constipation is mechanical, and, therefore, can only be adequately and permanently relieved by mechanical means.

The membranes or bands which are the cause of the stasis have been adequately described as to their position by Mr. Pringle. They may be present in well-marked form without producing constipation. The stasis is caused by the manner in which these bands are attached to the bowel or its mesocolon. If the membrane is short and causes angulation of the bowel, sooner or later it will be the cause of stasis proximal to the angulation. It is really a matter of failure of compensation. So long as the tone of the bowel is good, so long may the patient be free from constipation. A healthy, active life, attention to diet and to the regular action of the bowels, will help to keep the bowel in good tone. Acute or chronic illness, change from an active to a sedentary occupation, nervous upset, and so on, may influence the tone of the bowel and break down the compensation to such an extent that they are never properly recovered, and intestinal stasis with its attendant

evils becomes the bane of the patient's life, and, as already detailed, one intestinal stimulant after another is tried. The resemblance to chronic cardiac disorder is marked—there is similar dilatation and hypertrophy, a similar tendency to breaking down of compensation in untoward circumstances, and a similar temporary response to suitable remedies. One great advantage in the case of the colon is that the horizontal position tends to undo these angulations and allow the passage of its contents, and this intermittent relief helps the preservation or restoration of the tone of the bowel more than in the case of the heart.

I would lay stress on the fact that these membranes vary enormously in their arrangement and effects. They may be long or short, they may be broad or narrow, they may bind the bowel down over a large extent, and interfere but slightly with its action, or they may have but a narrow attachment to its surface or to its mesocolon, and by causing angulation interfere very greatly with the efficiency of its action. As a rule these narrow limiting bands, found especially at the hepatic and splenic flexures, are far more injurious in their effects than the broader membranes. As I have elsewhere pointed out,² I believe they have much to do with the presence of enteroptosis—that they are the primary cause. From its weight the dilated, overfilled bowel tends to sag downwards when the erect posture is assumed, and thus a vicious circle is initiated and tends to become more marked. In support of the developmental theory we find that a certain type of individual is subject to constipation, is subject to enteroptosis, is found to be possessed of these bands, usually of a deleterious variety. Such a type is recognizable in quite early life, and when the abdomen is opened for any reason these bands are found. They are not acquired as the result of long-continued constipation. I do not for a moment imply that the bands or membranes are not found in other individuals, but individuals of long, narrow build are the usual sufferers. It is curious how such individuals are found most frequently in occupations which do not allow of much exercise—for example, barmaids, dressmakers, clerks—of course, the worse kind of occupation for them, but their own inclinations and the demand for their type of build by employers seem to be the factors determining them to take up that kind of work.

The human race suffers many things owing to having adopted the upright posture. The upright posture enters into the formation of another wider vicious circle. Lessened tone affects pretty well all the tissues and functions of the body, but the effect on the flat abdominal muscles is very important. They become relaxed and flabby in action, and their relaxation encourages ptosis of the viscera—the one reacts upon the other. I labour this point somewhat because I believe it is so important, and that a chance of breaking up or preventing the vicious circle occurs with greater frequency as more and more abdomens are opened in children. As I have indicated, it is most frequently only when the active habits of childhood are given up that the strain on the bowel begins to tell. We can recognize the type, we can recognize the early symptoms, and we can advise prophylaxis in the way of choice of occupation, exercise, habits, etc., and when these fail or when opportunity offers we can try to remove the cause.

DIAGNOSIS.

If adhesions of the gall bladder are the cause of stasis in that organ, owing, put shortly, to kinking of the cystic duct, I find that the symptoms referable to the gall bladder are much more capricious than when due actually to gall stones or infective cholecystitis. The tenderness, the pain, both local and referred, and the dragging sensation are very variable. I have only once seen a trace of jaundice. The tension produced in the gall bladder may become so severe that actual gangrene may result. I have seen three cases of this very serious nature. I have found in these cases of gall-bladder adhesions that hyperaesthesia in the region of the angles of the ninth, tenth, and eleventh ribs on the right side is much more constant than in either gall-stone trouble or infective cholecystitis. I believe that these gall-bladder adhesions predispose to the formation of gall stones.

In a similar way the membrane which may cause kinking at the duodeno-jejunal junction, while producing dilatation and hypertrophy of both the duodenum and

stomach, causes symptoms which, while superficially resembling those of either duodenal or gastric ulcer or pyloric stenosis, do not conform, on more accurate investigation, to the usually definite symptom-complex of these conditions. Again they are more capricious. I have found frequently that the symptoms subside with greater rapidity when the patient assumes the supine posture, so much so that relief and capacity to take ordinary diet very quickly ensue. Usually the tenderness and rigidity of the abdominal muscles, found almost universally in cases of ulcer, are absent or little marked, but I have found that such patients complain of tenderness immediately above and slightly to the left of the umbilicus, lower down than that complained of in gastric ulcer.

A symptom which has led me to diagnose or at least strongly suspect a terminal ileal membrane is the presence of tenderness about 1 in. below and to the left of the umbilicus, as well as tenderness slightly below and internal to McBurney's point. There may be a line of tenderness between these two situations. Occasionally when pressure is maintained over the appendix area the subumbilical tenderness disappears. The only other condition which gives symptoms like these is an inflamed appendix adherent along the under surface of the mesentery.

On comparatively rare occasions only have I found dilatation and hypertrophy of the ileum above this membrane. I am not inclined to believe that this membrane causes intestinal stasis nearly so frequently as Lane and others suggest, and the absence of any evidence of stasis is explained, to my mind, by the fact that the free portion of the ileum usually rises out of the pelvis in an axis which corresponds to that of its terminal portion, which is more or less fixed in the iliac fossa by the membrane. This is merely another example of Nature's power of accommodation to abnormal conditions. Many cases of well-marked lower ileal membrane have never shown any symptoms of intestinal stasis, and in my experience in almost all cases in which symptoms of stasis have been present there has been ample cause found for it in the presence of well-marked angulation of the colon, usually at the hepatic flexure in the vast majority of cases. This ileal membrane only produces symptoms simulating chronic appendicitis. In a few of my cases patients have complained of colicky pains when they have assumed the supine posture, or when the bladder was distended. In such cases angulation has no doubt occurred, and only in these have I found hypertrophy and dilatation of the ileum above the kink.

The effect of pregnancy in cases of lower ileal membrane varies; in some the discomfort complained of in the right iliac fossa is no doubt due to formation of a kink, or to a drag upon the membrane as the ileum is displaced upwards. Relief occurs after parturition.

The Effect of the Meso-sigmoid Adhesion on the Ovarian and Spermatic Veins.

These veins run directly under this adhesion, and are often more or less caught up in it. If the sigmoid is loaded, if the patient is erect, there ensues a direct drag or pressure on these veins, causing congestion of them below the point of application of the force. This, in my opinion, explains the aggravation of so-called ovarian neuralgia or the pain of a varicocele when the patient is constipated, and the amelioration of symptoms when the patient lies down. Owing to the anatomical arrangement of the female pelvis, as compared with the male, deleterious effects are more marked in the former. Neuralgia, resulting from fibrosis or cystic disease of the ovary, mainly due to intermittent congestion, is very frequent in the cases under discussion. Remember our type in this connexion! It is extraordinary sometimes the extent to which the meso-sigmoid adhesion will implicate the ovary, tube, or broad ligament. One has again to think of the developmental descent of the ovary in order to explain this. I should like here to point out the beneficial effects of double ligature and division of the ovarian veins under these conditions. The comfort derived from this procedure exceeds that of any operation for varicocele.

Finally, I should like to remark that when I employ skiagraphy as an aid to diagnosis in gastro-intestinal cases, I think it necessary in order to arrive at anything like a

true interpretation of what occurs under ordinary conditions of living, that the patient should be given the bismuth meal quite early in the morning, and that the upright position, either sitting or standing, should be maintained all day, and a skiagram taken quite late at night. If indicated in any case, skiagrams may be taken at intervals during the day. It is sometimes of value to know what effect the horizontal position assumed at night has on the contents of the bowel by noting what is revealed in a skiagram taken next morning.

TREATMENT.

In consideration of all that I have said, it will be necessary for me to discuss only the purely operative treatment.

In the first place, I should say that if gastro-intestinal stasis is diagnosed a free vertical mesial incision is necessary for the adequate recognition and treatment of the conditions causing it. I always make, if possible, a para-central one. I repeat that the incision should be very free. (I was delighted to see some of Mr. Pringle's incisions when I visited his wards.) One should be able actually to see the conditions present. It is heart-breaking to watch a man attempting to diagnose or treat these by an incision through which he has to bore his hand.

The great indication for any surgical interference is the presence of dilatation and hypertrophy, be this in stomach, gall bladder, small intestine, or colon. The only difficulty which presents itself, to my mind, is what to do when one discovers these membranes in a child in whom it is possible that the changes in the alimentary tract have not yet asserted themselves, but from the character of the membranes angulation of the bowel may be expected as the child grows. Is it justifiable on this assumption to interfere, or should one wait till one is certain that stasis has begun? The large number of cases in which these membranes are present in adults without the cardinal evidences of stasis, dilatation and hypertrophy, appear to me to justify non-interference and reliance on measures at which I have merely hinted in order to keep up the tone of the bowel, except when the bands are very narrow.

As has been pointed out, stasis due to these bands can be treated surgically by fixation of the affected stomach or bowel, by division of the bands, by short-circuiting operations, and by colectomy. I have but little faith in artificial fixation of normally mobile organs, and never perform such an operation except in some cases of movable kidney.

If division is chosen as the operative procedure, I wish to emphasize very strongly that this must be done very thoroughly, and that an attempt should be made to cover over the raw surface thus produced either by sliding and suturing adjacent peritoneum or transplanting omentum. Incomplete division of one membrane may make angulation, caused by the remaining part, worse than before. Further, division of a distorting membrane at, say, the hepatic flexure and loosening of the bowel there, may throw an undue strain on what has been a previously comparatively mild angulation of the splenic flexure, and in this way merely shift the site of obstruction, and possibly even aggravate the symptoms. Therefore, if one limiting membrane is interfered with all others distal to it should be dealt with also as thoroughly as possible. Acute angulations should be transformed into gradual curves. All bleeding points should be carefully secured. If there is only a very thin, filmy covering left on the colon, or if there is a tendency for the bowel to drop back into its old position, a piece of omentum should be either pushed or transplanted over the denuded area. I prefer omentum without fat for this purpose. I think that fatty omentum is apt to be transformed into fibrous tissue, especially if transplanted, and this by its contraction may give rise to trouble again.

I wish to speak about the operation of ileo-sigmoidostomy for intestinal stasis only to condemn it strongly, except when done as a preliminary to colectomy. Whether the anastomosis is made above or below the sigmoid angulation, whether at the same time this angulation is removed by plastic operation on the meso-sigmoid adhesion, it is, I believe, only in the minority of cases that faecal material does not find its way, in a retrograde fashion, and stagnate in the colon, which has been converted by the operation

into a backwater, a real cesspool! The colon may, in such cases, be packed from end to end with faecal masses, and x rays, after a bismuth meal, show how long these masses may remain *in situ*. It is remarkable in these cases to find how the bismuth reaches the caecum and ascending colon within a day or two, and, whether from its weight or from a property of inhibiting peristaltic action, how long it remains there.

When admissible, I prefer division of the membranes to the operation of colectomy, because it is a less formidable and in suitable cases an equally efficacious procedure. It is, however, certain that some cases will not be relieved by this method. These cases, although they may be completely relieved for a period after the operation, yet sooner or later relapse into the old condition. The difficulty is to say exactly, when the abdomen is opened, which cases will require colectomy.

I feel that colectomy should be given the preference when there is marked ptosis of the ascending or transverse colon, or when, accompanying an acute angulation, the membranes are wide in extent and their thorough separation entails leaving large raw areas of the bowel. I think it is a slur on our Creator to look upon every colon as a cesspool, as some would have us! It is far too elaborate an organ to put such a base value upon. I think that one should save as much as possible; only the dilated and hypertrophied part should be removed. I prefer, if possible, to do short-circuit and colectomy at one sitting. Although an extensive operation, it is not a dangerous one when done by an efficient surgeon.

In many of these cases there is a long sigmoid loop. In order to leave as long a portion of the colon in the natural position of the colon, I have several times, after having excised ascending, transverse, and part of the descending colon, divided the peritoneum along the outer side of the remaining part of the descending colon and of the meso-sigmoid, and so mobilized and transposed these parts of the colon that at the end of the operation the patient was provided with a new transverse and descending colon, which was continued without any convolution into the rectum. In these cases the upper end of the descending colon became the commencement of the new transverse colon into which the ileum was implanted.

I think it is of great importance to preserve as much of the omentum as possible. It can usually be sheared off close to the colon without difficulty. It can be made to cover over raw areas or to moor the new transverse colon as may be indicated.

The results of successful operative procedures are very striking. The patients often veritably seem to renew their youth. They sleep better, eat better, look better, and feel better. They are desirous of and capable of leading more active lives, that is, they lose their mental and physical lassitude. What seems to give most delight and satisfaction is the natural, regular, and free movement of the bowels. I saw only this week a nurse on whom I had performed colectomy with transplantation of the remaining colon as I have just described. Appendectomy had been done previously without relief of her symptoms. She told me that she would readily have undergone the discomforts and pain of the operation two or three times over if she had been assured that she would be in the perfect health which she now experiences compared with the misery that she had previous to the operation.

These effects of the operation, the change produced on the patient's outlook on life, show the importance of the subject. The general public are being stirred in the matter. It is for us to guide them aright.

Proper treatment will have an effect on the peace and happiness of the nations, for is not Sir Arbuthnot Lane reported to have said recently that he "can understand a man preferring to live with a drunken woman rather than a toxic one. A drunken person is occasionally merry, but a toxic one never!"

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A SOCIAL democratic medical association has recently been founded in Berlin. It already has a membership of about one hundred. Dr. Zadek has been elected provisional secretary.