the constricted part has been penetrated by a bougie or elastic tube, and where an enema has thus been introduced into the dilated segment above, without any relief to the obstruction, or any delay of its fatal issue.

The inflammation into which this paralysis merges by a continuance of the obstruction, appears to affect the three coats of the bowel—serous, muscular, and mucous—in somewhat different degrees, in the several varieties of the process. As regards the simpler kinds of obstruction, a dark, sloughy, or gangrenous state of the submucous areolar tissue is, perhaps, the commonest result of such inflammation met with in necropsies. This state, which is often associated with great extravasation, is explained by the anatomy of the areolar tunic, and especially by its laxity, and by the dense network of arteries and veins which it encloses. Long prior to this sloughing, however, the free surface of the mucous coat is the seat of a croupy exudation, consisting chiefly of an abortive cell-growth formed by its altered epithelium. Softening and ulceration, or even sloughing, of its whole thickness in various parts, are the next changes to occur; and may be seen, to a variable extent, in most fatal cases. The muscular coat, thinned as it is distended, is obscured and lost by the extravasation and sloughing in which it is involved with the adjacent submucous areolar tissue. The peritonitis by which the serous coat shares this inflammation has an import depending chiefly on the inflammatory process set up; which, according as it is adhesive or suppurative, greatly modifies the sufferings of the patient, and the rapidity of his death. Large effusion of liquid is rare; and, as seen in examinations after death, is sometimes partially due to the changes which accompany, or immediately succeed, this event. The same suggestion also applies to the accident of *rupture*; which, though sometimes unmistakably seen to occur during life, and even to be immediately brought about by incautious manipulation of the abdomen of the sufferer, is, I believe, far more frequently produced after death, as an incident of incipient putrefaction, or even of the necropsy itself. In the thinned, softened, pulpy condition to which, before death, inflammation often reduces the obstructed bowel, it requires but a very slight increase of the intestinal gases, and a very inconsiderable progress towards the putrefactive dissolution of the tissues of the corpse, to give that increase of pressure, and decrease of consistence, which respectively effect, and permit, the bursting of the bowel. The detachment of those pasty adhesions which are often thrown out to prevent, or circumscribe, a rupture or perforation during life, is sometimes brought about in the same way; and is a contingency which, taken in conjunction with the foregoing, and with the possible mechanical rupture of the intestine, in even the most careful post-mortem examinations, reduces the real frequency of this occurrence, as an event or termination of intestinal obstruction, to something considerably less than the records of this state would suggest.

The *collapse* which usually ends the fatal cases of obstruction is too complex a product of its various stages and incidents to be summed up by any common description. It may anticipate, and prevent, the development of both stages. In its worst form, it merges into delirium, ending in coma. In milder degree, it often allows the sufferer to retain full possession of his intellect to the last; the moment of death being unannounced by any of the symptoms usually preceding this event. The latter variety of collapse, which is shared by so many other diseases of the abdominal viscera, is sometimes independent of any severe inflammatory lesion of the bowel; and hence appears to be producible solely by the pain and distension which constitute the chief symptoms of the first stage of obstruction. And, in correspondence with such an explanation, experience shows that this form of collapse, however severe or complete, does not forbid all chance of the patient's recovery, if the obstruction be removed by any of those means, natural or artificial, which I hope to notice in the two subsequent Lectures respectively.

A CURE FOR STERILITY. — The “*España Medica*,” quoted by *L'Union Médicale*, states that a very disgusting advertisement is frequently seen in a Madrid newspaper, so disgusting that the editor of the “*España Medica*” translates it into Latin for the sake of propriety: “*Pallidis puellis quarum valetudo nondum florescit, laborante menstruo, illis quæ frustrâ hactenus cupiebant gravidas fieri, hic est remedium quod ab externa regione secum perducit juvenis viator. Facile, simplex, naturale, datur secrete.*” The authorities must be very lax in their duties, when such obscene advertisements are allowed to appear.

REPORT OF A CASE OF SUCCESSFUL OPERATION FOR VESICO-VAGINAL FISTULA,

WITH REMARKS.

BY JOHN G. S. COGHILL, M.D.,
DEMONSTRATOR OF ANATOMY IN THE UNIVERSITY OF GLASGOW.

I BEG to submit to the attention of the profession the following case of successful operation for vesico-vaginal fistula. It was intended somewhat as an experiment to illustrate certain views which I was led to entertain regarding the essential principle of the operation so recently revived in America, and accepted with so much interest in this country, and upon the nature of which it serves to throw considerable light:—

Mary McS—, a short, stout, healthy-looking female, aged nineteen, gave birth to an illegitimate male child in April, 1857, after a very protracted and tedious confinement. She was in labour, under the care of a midwife, for nearly three days, when delivery was effected by a student of the University Lying-in Hospital, but whether with the aid of instruments or not cannot be ascertained, as the patient was insensible at the time, and her friends and attendants were not present. The head of the child, it is said, was exceedingly large, and this must have induced the difficulty of the parturition, as the pelvis, so far as I can ascertain, is of normal size. Four days after delivery, on attempting to rise in bed, something gave way internally; a gush of urine followed, and ever since she has been unable to retain a drop of urine at any time or in any position. She was subsequently received into the Town's Hospital here, and a variety of mechanical appliances was had recourse to for her relief, but without the slightest benefit. After a residence of two months, she left the hospital, and latterly has been under the care of Dr. Alexander, of this city, to whose kindness I am much indebted for being able to bring this case under the notice of the profession.

State of the Case.—On examination in the usual prone position, the floor or anterior, and part of the right wall of the vagina, within an inch of the cervix uteri, were found occupied by a transverse fistula, involving the fundus of the bladder posterior to the entrance of the ureters, and readily permitting the introduction of two fingers into the vesical cavity. Through the fistula a large hernia of the opposite wall of the bladder protruded, which was, however, reducible without much difficulty. The adjacent mucous surfaces presented traces of extensive injuries, the cervix uteri having partially sloughed away, and the uterine canal being quite occluded. The result of this latter condition was, that there exists amenorrhœa, with a strongly-marked menstrual molimen at the regular periods. In other respects the patient was a very favourable subject for operation.

I proceeded to operate on the 27th of March, in the presence of a number of my professional friends, in the manner which I shall now describe in detail. The patient was placed on her elbows and knees on a table just sufficiently large to hold her, so that no change of position could be permitted, and with the nates presented to a strong light. No chloroform was exhibited, as I believe this to be a highly injudicious position in which to administer it, more especially as the operation is, generally speaking, comparatively painless, and also as considerable assistance may be derived from the co-operation of the patient herself. Bozeman's speculum being introduced, the parts were thus fully exposed, as seen in section in Fig. 1: A being the vesical wall, opposite the fistula, protruded through it; B the anterior lip of the fistula; and C the posterior; the space between them representing the fistulous opening. The difficulty presented by the protrusion of the bladder was overcome, and the process of paring or rawing the margin of the fistula rendered quite easy, by using spatulæ bent so as to adapt them for raising the anterior and posterior lips of the fistula respectively, at the same time depressing the vesical protrusion with the utmost facility. This latter indication is one of the highest consequence; for on one occasion I saw a case of vesico-vaginal fistula placed on the table for operation where this difficulty could not be in any way overcome, the consequence being the abandonment—for the time at least—of the intended operation. The spatulæ I employed were of steel ribbon, about half an inch broad, and extemporized for the occasion. Reference to

Figs. 2 and 3 will explain better than any description of mine their form and mode of application.

In Fig. 2 is represented the spatula, D, used for raising the posterior lip of the fistula with a single straight limb. It is introduced from below, and rests on the anterior wall of the vagina; and its handle, bent at right angles to the limb, is held downwards in a line with the thighs. The posterior margin, c, is represented as raised on the extremity of the spatula; the vesical hernia, A, and the anterior margin, B, depressed under the rest of the limb.

In Fig. 3 is seen the spatula, E, used for elevating the anterior lip. Its limb is double, or bent on itself, the convexity being introduced into the vagina. The point or free extremity of the limb is brought within the fistula till the anterior lip, B, is raised on it, and the hernia, A, and posterior margin, c, de-

pressed below and behind it; while the handle of the spatula, also bent at a right angle to its limb, rises from the posterior vaginal wall, and is held in a line with the handle of the speculum.

Having introduced spatula B, and elevated the posterior lip of the aperture, I inserted the double hook (Fig. 8) into the mucous membrane of its vaginal surface, and detached it freely by means of the semicircular knife (Fig. 4), cutting with its convex edge, so as to make a raw bevelled margin. The spatula, c, was then introduced, the anterior lip raised, and the same process repeated on it. With the same knife, and with the assistance of this spatula, the lateral and somewhat angular margins of the fistula were similarly treated, the bevelling all round the margin of the fistula being effected entirely at the expense of the vaginal mucous membrane.

By means of Professor Simpson's tubular needle, represented with its improved curved form in Fig. 9, I introduced six sutures of No. 26 common iron wire; the point of the needle being entered in the vaginal membrane, at the distance of about half an inch from the anterior bevelled edge; then made to pierce midway between the vaginal and vesical margins of the bevelled lips of the fistula, and again brought out through the vaginal membrane, about half an inch beyond the posterior bevelled edge, the point being guided in its course by the blunt hook (Fig. 10) used by Bozeman. The sutures were then tightened, and the lips of the wound brought together, by drawing respectively on the ends of each suture passed through the eye in the instrument represented in Fig. 7, its oval, convex disc being pressed down on the line of the wound. The ends of each suture were then passed through the eyes of the twister (Fig. 5), which I first proposed for the purpose of fixing wire

sutures. By giving two or three turns with this instrument, held in the right hand, while the ends of the sutures are held tightly in the left, perfect coaptation of the edges of the wound and fixing of the sutures may be effected at the same time. The manner of fixing the sutures, and their appearance in the line of wound, are well seen in Fig. 6. Nothing could exceed the firm and regular appearance of the wound as closed in the manner just described. A piece of lint, moistened in cold water, was now placed over the wound; the patient removed to bed, and placed on her back, with the knees bent and feet drawn up; the permanent pewter catheter introduced, and two grains of solid opium administered.

The progress of the case throughout was most satisfactory, the pulse never rising above 80; and no local pain complained of. Tolerance of the supine position was induced by occasional small doses of morphia in solution, to which the patient had

recourse when this constrained position became irksome, and at the same time it obtained the essential condition of constipation during convalescence. On the seventh day, I removed the catheter, and only employed it every three hours, increasing the interval gradually. On the ninth day, I removed the sutures with some little difficulty, as they had become quite embedded in the tissues. They were quite unaltered, and exhibited neither in themselves nor in the track whence they had been withdrawn the slightest trace of rust or corrosion, although they had for nine days been freely exposed to the action of the various fluids. This property of "annealed" iron wire, in virtue of which it is termed "passive," was originally pointed out by Schönslein, but first offered in explanation of its non-corrosiveness, when embedded in animal tissues, by Professor Simpson, in an able paper lately published on this subject. Twelve hours or so after the withdrawal of the sutures, the patient was for the first time permitted to empty her bladder spontaneously, which she accomplished without difficulty, and has continued to do so ever since.

To appreciate fully the advantages afforded by the operation for vesico-vaginal fistula I have just described, it is necessary to compare it with the elaborately-detailed processes and the imposing and extensive armamentaria of Drs. Sims and Bozeman, the transatlantic resuscitators of this originally British operation, or even as it has been simplified more recently by Professor Simpson of Edinburgh. The method of operating in question resembles in principle the original operation of Dr. Sims, rejecting, however, the "clamps," or silver bars, to which he fastens the wires on each side of the wound, like as in the ordinary quilled suture. The feature of Dr. Bozeman's operation is his passing the sutures through a perforated metallic plate or "button," and then clamping them on it with split shot; or as in the combination of the two recently proposed by Mr. Hilliard of Glasgow, and published lately in THE LANCET. Professor Simpson discards the button and split shot of Dr. Bozeman, and fastens the sutures simply through a circular ring or splint of twisted iron wire surrounding the wound. The professed object of the button is to protect the wound from the vaginal secretion, which, if normal in character, I hold to be the best dressing it can have. The circular wire splint, on the other hand, is used with the intention of affording support to the margins of the wound, an indication not fulfilled by the button. Now, I conceive that if both these methods, so opposite in design, are perfectly successful in result, as they undoubtedly are, neither the lead button nor the wire splint are essential elements in its attainment, and must accordingly be regarded as superfluous. Besides, they increase to an immense extent the difficulties of the operation; much time is occupied by the manipulations necessary in their adjustment, and they are very apt to become displaced and disarranged. They ought therefore to be abandoned.

These considerations have been suggested to me by what I have observed in six or seven cases operated on in the various modes in question. The success of the operation, I hold, depends essentially upon the employment of metallic sutures; and the next and only other point of importance to be considered is the simplest and readiest means of adjusting or fastening them: this, I believe, is best accomplished in the manner adopted in my operation. I have also simplified the process of paring or rawing the margin of the fistula, by substituting for the straight and two lateral knives and the two pairs of bent scissors used by Dr. Bozeman, the simple convex-bladed knife represented in Fig. 4, which can be readily swept round the edge of the fistula without a change of hand. The double hook will be found to give a better hold of the flap to be removed than any more bulky and comparatively unwieldy forceps and vulsella. The spatulae, even where no vesical hernia protrudes through the fistula, or where there is little eversion of the vesical mucous membrane, will be found greatly to facilitate the exposure and steadying of the fistulous margin during the difficult process of paring.

I have taken the liberty of giving a sketch of Prof. Simpson's invaluable needle (Fig. 9), and of Dr. Bozeman's blunt hook (Fig. 10) for directing its point, to complete the drawings of the entire set of instruments which, with the exceedingly beautiful speculum of Dr. Bozeman, constitutes the entire armamentarium which I believe necessary for the performance of the operation. Simplicity of operative procedure combined with rapidity of execution are the two great desiderata of surgery, and I think I have succeeded in reducing the operation for vesico-vaginal fistula as nearly as possible to these desired conditions. I trust that I shall soon be in a position to bring one or two other cases illustrative of this mode of operating under the notice of my medical brethren.

Sauchiehall-street, Glasgow, April, 1859.

DELIRIUM TREMENS, CAUSED BY EXPOSURE TO COLD AND WET.

By WILLIAM TILBURY FOX, M.D. Lond.

MR. A—, aged forty-five, a very temperate, steady, and active man, low in stature, and possessing a short, thick neck, was the subject of the following curious attack. He is the only surviving and youngest of seven sons, five of whom have died suddenly from cerebral disease ("in fits"), one being paralysed, and a second affected in somewhat the same manner as in this case, and who is said to have had delirium tremens, and to have died three hours after the attack commenced.

This man got up and went about his business at six A.M. on the 30th of March (on which day a snow-storm occurred), in his usual health. He took scarcely any breakfast (this being not uncommon with him), came home and wrote for an hour and a half, seated before a good fire, had half a pint of beer, and went out with his horse and cart at eleven A.M., and as it was "his busy day," he had a good many places to go to, and a good deal of worry. At mid-day he returned (having been out about two hours), perfectly wet through from head to foot, cold, and shivering very severely. He had not taken anything since he left home at eleven A.M. After putting his horse and cart away, he went in-doors, where he had a few words of dispute with some one upon business matters. Soon after, an attack of severe shivering came on; he said he felt very numb all over, and became quasi-delirious, insisting upon going home. He did not appear to know his wife, and fancied he was in a strange place. He had some hot brandy-and-water. At times he was perfectly rational, and then complained of tingling in the palm of the right hand. He could walk perfectly well, and had no headache, but his feet were cold. He laid down on the sofa, and had hot bottles applied to his feet. At half-past three P.M. I found him lying on the sofa, with his eyes closed, and apparently dozing. He did not notice my entrance, but when spoken to, that his attention might be aroused, he was very much annoyed to think I should intrude upon him. He again insisted upon going home, and wanted his wife, desiring "the women to go away from him, and those people to leave off picking his hands," &c. When asked if he would go to his bed, he said "he was not to be gammoned—he was not going to any other but his wife's bed," &c. When his attention was particularly called to any point, he for the moment was quite sensible, but immediately relapsed into an illusive strain. There was present the peculiar mental state of delirium tremens—i.e., his attention was easily aroused, but could not be fixed; his judgment was quick, immediate, but incorrect. His illusions were not confined to one subject. Face slightly flushed; extreme shivering at times; pulse small, slow, deliberate, 60 only; surface cool, especially hands and feet; tongue tremulous, flabby, and covered with a creamy fur; no paralysis at all; pupils moderately dilated, sluggish; conjunctivæ slightly suffused. In lucid moments, when aroused, he said he had no headache, but complained of tingling in the palm of the right hand. When his attention had been particularly called to the fact that his wife was near him, he said "All right," but it is doubtful if he recognised her. He was not at all violent. General sensibility seemed normal; reflex actions perfect. Delirium tremens was diagnosed. The treatment consisted in the exhibition of an effectual emetic, with the view of exciting the action of the skin, and the application of a very large mustard poultice to the neck. He was well wrapped up; and after the emetic had fully acted, which it did between six and seven P.M., he had a comfortable sleep, and awoke quite himself again, with the exception of feeling a little weak.

Remarks.—The subject of the above attack is a very temperate man; there is no habitual or temporary taking of stimuli of any kind to account for it. Since his recovery he has stated that he remembers everything which occurred until he came in-doors after putting his horse and cart up, when he lost himself. His family is predisposed to suffer from head affections (apoplexy). When seen at half-past three P.M., his breath smelt of spirit (the brandy-and-water his wife had given him). No doubt the exposure to cold and wet was sufficient to contract the vessels of the surface, and thus produce congestion of the brain. Whatever was its *modus operandi* (by shock or by inducing cerebral congestion), his getting wet through and the cold formed the real cause of the attack. The case affords some points of practical value—

1st. As showing that you may have in delirium tremens a