operation on the living subject. The patient was about twenty-five years of age, the uterus had never been impregnated, and was in the normal situation. I mention this, lest it should be supposed to have been a case of prolapsus, in which the operation would of course be more easy and simple. Having lodged the os uteri in one of Mr. Fergusson's specula, I first passed the uterine sound to the fundus uteri, so as to assure myself that no uterine impediment existed; after this, I passed in the Fallopian catheter very readily, and directed it towards the left Fallopian orifice. Steadying the catheter in this position with the left hand, I introduced the whalebone fibre through the catheter, and into the Fallopian tube, for about an inch and a half, with the greatest ease,—indeed I was surprised at the ease with which it passed; but this I attributed to the great care I had taken in maturing my plan beforehand. I withdrew and re-introduced the bougie several times, without producing any pain or uneasiness whatever. In fact, the only difficulty met with was in passing the sound through the constricted portion of the cervix uteri.

In the operation upon the Fallopian tube, the patient was not at all conscious of any sensation of any kind, more than from the ordinary specular examination. I found it easier of performance upon the living than the dead subject; or rather, I was able to pass a larger bougie than would have entered the Fallopian tube of the preparation. From my subsequent observations, I have no doubt whatever that the calibre of the tube is greater in the living than in the dead, owing to the contraction which occurs in the tissues of the latter. I have now performed the operation repeatedly, in the same manner, without pain or difficulty, or any subsequent inconvenience whatever, as far as the mouths of the tubes are concerned. When the tubes are not imperforate, they can, with due care, be readily operated upon, if the sound can be passed to the fundus uteri. Of course it is necessary that the operator shall be familiar with the use of the speculum, so as to command the os uteri with ease; and the uterus must not be materially displaced, otherwise the utero-vaginal curve of the instrument will not be adapted to the curve of the organs themselves. Where any difficulty is experienced, it will not be at the Fallopian tubes themselves, but before reaching these organs. This is in consequence of the very different state of the vagina and the os and cervix uteri in different women. The os uteri and the uterine cavity should be in a healthy state at the time of the operation.

One word as to any supposable ill results from the new operation. I have not observed any bad symptom whatever which could fairly be attributed to it. Nor are any, as I believe, to be expected, in careful hands, if we throw aside the nameless fear which always attaches to any attempt to deal with organs hitherto sacred to the touch of the medical practitioner. As regards the uterus, the operation is less formidable than the passage of the full-sized uterine sound; the dilatation of the os uteri by the dilators in common use among obstetricians; the introduction of medicated bougies into the cavity of the uterus, and many other applications of obstetric surgery to this organ. As regards the Fallopian tube, though the bougie is calculated to remove obstructions, it is too flexible to injure the very dense structure of the uterine extremity of the tube. Any irritation it can produce, if used with caution, is inconsiderable, when compared with the monthly irritation to which these tubes are subject physiologically. As regards the peritonæum, there can be no danger whatever of peritonitis, as it is not proposed to approach the fimbriated extremities of the tubes, where the lining membrane becomes continuous with the peritonæum. It is in the narrow portion of the oviducal canals, near the uterus, where the removable obstructions occur. But the best answer to hypothetical objections of this kind which are sure to be raised is, that in practice no peritonæal disturbance has ever followed the operation. At the same time, I would urge great caution in the performance of the operation, particularly by those who are not accustomed to the use of the speculum and the actual treatment of uterine disorders.

On considering the subject, it appears to me extraordinary that the Fallopian tubes have not been brought within the province of remedial manipulation before. It is the characteristic of modern surgery to penetrate more and more into the recesses of the body. We have operations upon the Stenonian ducts, upon the lachrymal ducts, and upon the Eustachian tubes, quite as delicate as that which I have now described upon the Fallopian tubes. Surgery has long since applied itself successfully to the urethra, the rectum, the trachea, and the œsophagus. I can only account for the neglect of the Fallopian tubes, because of their depth from the surface; but, by the speculum, the os uteri is, in effect, brought to the surface of the body; and the distance from the os

uteri to the mouth of the tubes is short, and without any material impediment.

In a future communication, I propose to give some further particulars respecting the operation, and its application in practice, but particularly with reference to the removal of sterility by deobstructing the Fallopian canals at their narrowest and uterine portion. I do not mean to assert that obstruction or occlusion of the Fallopian tubes is the most prevalent cause of sterility, but it must undoubtedly be a common cause of this affection. No one conversant with the anatomy of the generative canal can doubt that a small plug of inspissated mucus or coagulum may occasion barrenness. I believe the operation I have described ought, where there is no special contra-indication or difficulty, to be cautiously performed in all cases where there is the desire of offspring, and where the sterility is not remediable by ordinary measures.

Bolton-street, Piccadilly, May, 1849.

REPORT OF A CASE OF SPONTANEOUS RUPTURE OF THE UTERUS: RECOVERY.

By JAMES CHURCH, Esq., Sittingbourne,
SURGEON TO THE FEVERSHAM UNION.

MRS. B—, aged forty-two, a large, corpulent woman, the mother of nine children, requested me to attend her in her confinement. She had complained of unusual pains in the region of the uterus a month or two previous, which were treated with opiates and laxative medicines.

Sept. 8th, 1848.—I was sent for, and found, about two o'clock A.M., the membranes broken, the labour progressing slowly, with strong pains at long intervals.

9th.—Os uteri fully dilated, the head of the child almost pressing on the perinæum. Whilst I was sitting by, expecting half a dozen more pains would complete the delivery, she suddenly exclaimed, "What a cramp I have in my belly; if it continues I'm sure I must die!" Supposing, from the cessation of the expulsive pains, that irregular action of the uterus had set in, I gave her thirty minims of sedative solution of opium. Soon afterwards she became sick, and vomited, with difficulty of breathing and cold perspiration, still complaining of the cramp in the abdomen, which I was in hope the opiate would relieve. After waiting during what I considered a sufficient time for it to act, without much apparent benefit, I made an examination, when, to my surprise, I found the head had receded beyond my reach; there was hæmorrhage; and on placing my hand on the abdomen, I distinctly felt the child through the integuments. Being now fully aware of the nature of the case, (which I had never before met with, though a practitioner of thirty-five years standing,) I informed the husband of the probability of a fatal termination; and having determined on immediately delivering the woman, I sent him to request the attendance of Mr. Snowden, a neighbouring practitioner. On that gentleman's arrival, I introduced my hand into the uterus, and found that an oblique rupture had taken place, extending from near the fundus towards the left side, through which the child had escaped into the cavity of the abdomen. With considerable difficulty, by the co-operation of Mr. Snowden, at five o'clock A.M. the delivery was accomplished of a large male child, dead. The placenta was removed with little or no hæmorrhage. Considering there was no chance of the patient surviving long, I directed her to be kept quiet; and after giving an anodyne, I left her. On my visit at noon, I found her much subdued in vital power; in great pain; pulse 120, with slight sickness. Gave her twenty minims of sedative solution of opium, to be repeated every four hours; and ordered a small quantity of gruel to be occasionally given. At my evening visit she was about the same.

10th.—This morning most violent vomiting came on, and lasted the whole day, during which a vast quantity of green, acrid matter was thrown off, excoriating the mouth and cheek, over which it ran. Towards the middle of the night, by the steady administration of four drops of Scheele's prussic acid, in mucilage, every four hours, it abated, leaving the patient in a most exhausted state, full of pain, and with the abdomen much distended. I gave her an opiate, ordered arrowroot and milk to be given, in small quantities, through the night, and left, without a hope of seeing my patient alive in the morning.

11th.—Eight A.M.: Found she had passed a restless night, with occasional vomiting; pulse 120; tongue brown; great pain, tenderness, and distention all over the abdomen. Ordered the abdomen to be fomented with flannels wrung out in hot

water. At noon violent diarrhoea came on, and continued throughout the day and night. Gave compound chalk mixture, with tincture of opium, every three hours. Lochia, which had never ceased, now became profuse.

12th.—Diarrhoea abating; she vomited frequently, in a great deal of pain; pulse 110; brown, dry tongue; much tenderness and distention of the abdomen. Applied a blister to the epigastrium. Ordered, one grain of calomel and one grain of opium to be given night and morning; with two tablespoonfuls of a mixture composed of carbonates of soda and magnesia, and peppermint water, every four hours.

13th.—Vomited less; complained of cramp; abdomen distended; pulse 110; furred, brown tongue; much pain. Medicines continued.

15th.—Vomiting had ceased; great hardness and distention of the abdomen. I this day observed a slight blush of redness, of the circumference of a common tea-saucer, inclining to the left of the umbilicus.

16th.—Much improved; pulse 100; tongue cleaning, and moist at the edges. Omitted calomel. Gave effervescing medicine, with tincture of opium. She continued thus, without much alteration, until the 23rd, when the redness of the abdomen left, hardness and distention remaining.

25th.—Redness suddenly returned, of the same circumference as before, in the middle of which a small swelling of the size of half a walnut was seen, apparently containing matter. Ordered poultices to be applied on this and following day.

27th.—Abscess burst in the night, discharging over the bed and bedstead a hand-basinful of foetid matter, besides what was absorbed by the bed-clothes. Pulse rapid; fainting, and great perspiration.

28th.—Continued discharge of foetid matter; violent local inflammation and sloughing of the integuments, to the full extent of the previous redness. Pulse 120; great perspiration. Gave large doses of sulphate of quinine and diluted sulphuric acid, with tincture of opium. Ordered beef-tea, port wine, &c.

29th.—Purulent discharge great externally, through the abdominal aperture; similar discharge now came per vaginam; the integuments over the space of a tea-saucer all sloughed away, leaving the muscles of the abdomen exposed. Continued quinine, acid, and tincture of opium, in decoction of cinchona, every four hours. Ordered to be taken daily a pint of port wine, a pint of Guinness's stout, one pound of meat, beef-tea, &c.; fortunately, my patient's appetite was equal to the occasion.

30th.—Discharge very great from the external opening as well as from the surface of the sore, which looks more healthy. Tongue almost clean; pulse 100; great perspiration and debility.

Oct. 1st.—From this day the sore granulated kindly; the matter externally and internally became healthy. The hard substance whence the internal matter proceeded, which I presume to be the uterus, gradually lessened, but was seemingly attached to the walls of the abdomen.

16th.—Discharge of matter per vaginam ceased, though still great from the external opening in the abdomen. The space in the integuments continued filling up with healthy granulations. From this time to Nov. 17th, 1848, she continued to improve, on which day all discharge had discontinued; and the wound healed, leaving a large puckered cicatrix. Underneath, seemingly attached to the walls of the abdomen, was a hard substance, of the proportion of a middle-sized lemon. She is now, with the aid of a suspensory bandage, able to get about and attend to her family. How my patient continued to live from day to day during the first part of the time, I am at a loss to imagine, and nothing but the unlimited quantity of nourishment she took enabled her to bear up latterly against the enormous discharge.

In this case it ought to be conceded, that such was the consideration and liberality of the board of guardians of the Feversham Union, and neighbouring gentry, that but for their truly kind co-operation all professional effort would probably have been frustrated.

Green-street, near Sittingbourne, 1849.

A CORRESPONDENT, signing himself "Medicus," has addressed to us some observations on the case of ruptured uterus reported by Mr. W. H. Borham, in *THE LANCET*, vol. ii. 1848, p. 551. After praising the candour of Mr. Borham in detailing a case unsuccessful in his hands, he remarks,—

"But while commending this faithfulness on the part of Mr. Borham, I must dissent, in some measure, from the plan adopted in this case. At the same time I am aware of the rarity as well as the extreme difficulty of accurately diagnosing and managing the uterine efforts in most cases where there is a risk of rupture taking place. It would have been better to have stated the precise period at which the labour-

pains first set in; whether or not there was any irregularity in the brim, or deformity of the pelvis; the state of the rectum, stomach, and bowels; also the bladder; the habit and constitution of the patient, whether plethoric or otherwise; also the temperature and state of the parturient canal; the character of the discharge, if any, from the vagina previous to the rupture, as it has been stated by Dr. Davis very recently, that in cases of very protracted labour, when the discharge assumes a dark olive colour, it indicates the necessity for instrumental or speedy delivery. All these particulars have been omitted. Moreover, as there was doubt about the presenting part of the child, whether or not the examinations were very frequently made, and whether or not they were instituted during or in the intervals of the pains, should have been mentioned. It appears, that about eight o'clock on Saturday evening, the 5th of August, the patient had then been "in hard labour about ten hours," and "little progress had been made; the os uteri dilated to about the size of a five-shilling piece, and felt elastic, like a warm India-rubber ring." A short time after this, "the pains became excessively violent," and, with the assistance of Mr. Batten, instruments were about to be used to perforate the head; but before doing this, the patient was allowed to stand up, and then very speedily followed the rupture of the uterus. The head was not delivered before the mother died; it was subsequently found to be about twice its natural size. In remarking on the above case, there can be but one opinion, that delivery most unquestionably ought to have taken place sooner. ("Medicus" proceeds to enumerate his reasons for this conclusion.) "The allowance of the erect position was most unwise, as we well know that this position increases the intensity of the pains by bringing the body and head of the foetus into immediate contact with the inner surface of the neck and mouth of the womb, and with a uterus already in an over-excited state, must have tended greatly to produce the fatal result. Bleeding largely, if the patient could bear it, or the exhibition of tartar-emetic, not given so as to produce vomiting; emptying the rectum by injections, or, perhaps, chloroform, or a large opiate, to tranquillize the nervous and vascular systems, and speedy delivery, either by turning and perforating the head, or the perforation of the head first, would have been, in my opinion, the proper course, particularly after waiting sufficiently long, and being at the same time tolerably certain that there was a malposition of the head. The life or death of the child previous to this step might also, with much judgment, have been first ascertained by the stethoscope, applied to the parietes of the abdomen. The nature of the laceration of the uterus from side to side is important, as bearing out the observations of Dr. Tyler Smith, that rupture of the uterus takes place generally, not from the advancing foetus, or from the uterus being crushed between the foetal head and bony pelvis; but that it tears itself by its own contractions,—that the rupture takes place more frequently in post-primal than primiparous women, and that the prolonged efforts of the uterus in cases of laborious parturition probably first induces softening, and then laceration. Dr. T. Smith's very practical remarks on the irritation of the orifice of the vagina, the parturient canal, and os and cervix uteri, inducing uterine reflex action, are most important, and require the attentive consideration of all engaged in the practice of midwifery.

Nottingham, 1849.

ON THE MAGNETIC THEORY OF CHOLERA AND OF THE POTATO BLIGHT.

BY WILLIAM REEVES, Esq., M.R.C.S.E.

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In the first volume of *THE LANCET*, for the year 1845, at page 320, there is a paper written by me, which you kindly inserted, treating on the cause of cholera. It is headed thus: "Cholera, the Result of Inflammation of the Spine." I believe this is the first paper written and published unequivocally attributing the disease to spinal mischief. Whether cholera is the result of actual inflammation of the spinal cord, or of some derangement affecting its functions, and resulting from magnetic error, a derangement affecting our true magnetic relation with the globe, is open to question. We know of late there has been extraordinary magnetic phenomenon exhibited; such, for instance, as powerful magnets having their attracting force almost entirely withdrawn from them, as it were subtracted. Annesley, who certainly is even yet the best authority on cholera, has the following, in his work on the "Diseases of India," p. 122 second edition:—"Dr. Johnston observes, in speaking of the diseases of the Mediterranean, that during the strong southerly winds the circulating system in