providing the symptoms of a calculus were well marked, of some standing, and had resisted other treatment." The failure of other means to afford relief, and the serious condition of the patient's health, justified, in my opinion, an exploratory operation in the case related.

Second, the complete cure which followed the operation is a curious but encouraging fact. The absence of any discoverable condition which could have caused the symptoms, makes it impossible to decide in what way the operation acted as a curative measure, but that it did so is indisputable. The difficulty of making a certain diagnosis of the presence of a renal calculus in all cases, by a study of the symptoms, and by external examination, is well illustrated in the present instance.

The good result in the case points to the employment of a free exploratory incision, or to some powerful counterirritant in the treatment of renal symptoms such as existed in this patient, should ordinary means fail to relieve.

CASES OF RUPTURE OF THE UTERUS AND VAGINA.*

By THOMAS MORE MADDEN, M.D., M.R.I.A.,

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THOUGH many years have elapsed since the opinion that rupture of the uterus is an occurrence from which recovery is impossible, was disproved by the remarkable cases published by my distinguished friend Dr. McKeever of Dublin, still this remains the most fatal, though, fortunately, the least frequent, of all the complications of labour. The relative frequency as well as the general fatality of this accident may be seen by the following table, which I have compiled from all the available statistics of the great Maternity Hospital with which I have been connected.

Table of Cases of Rupture of the Uterus in the Rotunda Hospital.

Date.	Authority.	Total Confinements.	Cases of Rupture of the Uterus.	Primiparæ.	Multiparæ.	Recovered.	Died.	Sex of Children.	
								Male.	F.
1868 1873	Dr. Clarke	10,387	8	1	7	1	7		
	Dr. McKeever	8,600	20	2	18	2	18	15	5
	Dr. Collins	16,654	34	None.	34	2	32	23	11
	Dr. McClintock	6,634	9	None.	9	None.	9	8	1
	Dr. Hardy								
	Dr. Johnston	13,748	17	1	16	1	16	10	7
	Dr. Sinclair								
	Dr. Johnston	5,791	4	1	3	None.	4	3	1
		61,814	92	5	87	6	86	59	25

Four cases of this accident have come within my own observation. Of these, two occurred in the Lying-in Hospital, one in an external maternity case to which I was summoned, and the fourth I saw in consultation. Of these, three died and one recovered. And, as this complication is, as has been just shown, comparatively rare and generally fatal, I think that the particulars of the latter case may be of some interest to the Association.

CASE I.—May 31st, 1874. I was called at 6 A.M. to see a case in consultation with Dr. Dudley White. The patient was a large plethoric woman, in labour of her eleventh child. It was an arm-presentation, and the hand had come down beyond the external parts. She had been in labour since the previous evening under the care of a midwife, who appears not to have made out the presentation; at least no assistance was sent for, although the pains were very violent and unremitting till about 4.30 A.M., when, as she herself stated, after a very severe pain she felt something give way, and from that moment the pains ceased. About 5 A.M., Dr. Dudley White was summoned, and immediately after his arrival kindly afforded me an opportunity of seeing the case with him. The arm was now protruding from the vulva; the hand was swollen and discoloured. The woman was in an extremely weak and exhausted condition; and, having first given her a stimulant, we moved her to the edge of the bed (not very easily, indeed, as she was a woman of enormous size), and at once proceeded to effect delivery by version. I found some difficulty in turning, as the body of the child was firmly wedged in the pelvis. The child was a boy weighing about ten pounds, and of course was still-born. After a short interval, Dr. Dudley White

introduced his hand to remove the placenta, and found that it passed into the peritoneal cavity. On examination, we discovered a large rent extending obliquely upwards and forwards across the anterior wall of the vagina and posterior wall of the cervix to the body of the uterus. It was completely involving all the coats of the injured parts, and was so wide that my hand slipped at once into the abdominal cavity amongst the coils of the intestines; nor could the child have escaped passing through this vast laceration were it not for the manner in which it had been wedged down into the pelvis before the rupture occurred. As soon as the placenta was removed, I grasped the fundus uteri until I felt it pretty firmly contracted beneath my hand. There was little external hæmorrhage, but a considerable effusion of blood was going on into the peritoneal cavity from the open uterine vessels. The patient was now pale and collapsed, and it was evident that any further loss of blood must be fatal; therefore, with Dr. White's sanction, I saturated a sponge in the strong solution of perchloride of iron, and applied it freely to every part of the rent. The effects were instantaneous. The woman complained of intense pain, but the hæmorrhage ceased completely, and the lacerated gaping wound in the vagina and uterus contracted sensibly under the stimulus. The woman was still cold, pulseless, and apparently moribund. Brandy and forty drops of Battley's liquor opii were thrown up by the rectum, and sinapisms were applied over the heart, etc. I left her, firmly expecting to hear of her death that afternoon. To my surprise, however, Dr. White told me she was still alive, and I again saw her with him. We then agreed to give her opium and calomel in grain-doses of each every fourth hour. The same treatment was continued during the following day; and the intervals between the medicine were gradually lengthened on the subsequent day.

It would be needless to dwell on the progress of the case, further than to say that she recovered perfectly, although the convalescence was interrupted by a severe attack of metropéritonitis. She was able to sit up on the tenth day after the accident, under the most judicious care of Dr. White, to whose unremitting attention and skill this patient in no small degree owes her recovery from the most serious complication of parturition.

In the foregoing case, all the usual premonitory and actual symptoms of the accident occurred in their ordinary sequence. In the one I am about to relate they did not, nor was the accident discovered until after the patient's death. The rupture in the first case was promoted by violent, unremitting, but ineffectual uterine action, the head being so firmly wedged into the pelvis that advance without assistance was impossible; then came fixed suprapubic pain; next, after a violent expulsive effort, the patient screamed out that something had given way; the pains ceased, and the presenting foetus somewhat receded. The pulse, which had been hard, quick, and full, now suddenly fell in volume, but increased in frequency; the abdomen became swollen and tender, the tongue dry, the skin cold, and the vaginal discharge sanious. In the following case none of these symptoms presented themselves.

CASE II. *Complete Separation of the Uterus from the Vagina.*—Ellen Deegan, from Lower Mecklenburgh Street, was admitted to No. 3 Ward March 12th. Her age was 33; it was her first pregnancy. She was delivered the same night a 11.45 of a healthy female child weighing six pounds. She was eighteen hours in labour, five hours in the second stage, and the third stage was immediate. She had a very long first stage, and when admitted had been nearly eight hours in it. The os was about the size of a shilling, and the head low down in the pelvis, pressing on the cervix uteri. Two warm baths were given, which had the effect of gradually relaxing the os uteri. The pains in the second stage were weak, and there was considerable delay from inertia. A stimulating enema, and afterwards a dose of ergot, having been first tried without effect, she was put under chloroform, and I delivered her by the forceps. I had no difficulty whatever in this operation; all that was necessary was to make the turn, and no force was required or used. The child was born alive, and the operation did not occupy two minutes. On the following day (13th), in the morning, there was tenderness on pressure over the abdomen, and her pulse was 100. She was ordered turpentine stupes and poultices, and draughts containing one drachm of turpentine with fifteen minims of acetum opii every third hour. Wine and beef-tea were administered. On the 14th, there were less tenderness and tympanites. The treatment was continued. On the 16th, at 4.30 P.M., she suddenly became collapsed, and died at 9 P.M.

A *post mortem* examination was made March 17th. On opening the abdominal cavity, the peritoneum was found in an advanced stage of inflammation. That portion of it covering the uterus was slightly ulcerated, and the lower part of the peritoneum was black and discoloured; but the peritonitis was not general, the upper half of this membrane being nearly normal in appearance. The left ovary was healthy; the right congested and enlarged. The uterus was intensely inflamed in the cervical portion, which was actually in a state of sphacelus. The ulcer-

* Read before the Obstetric Medicine Section at the Annual Meeting of the British Medical Association in Norwich, August 1874.

ation had extended completely through the cervix, so as to have entirely separated the uterus from the vagina; the line of separation being as sharp and clean as if effected by the knife. The fundus and body of the uterus externally presented no abnormal appearance; but, on making a section, the middle, and still more especially the internal muscular coats, as well as the lining mucous membrane, were found to be much inflamed, the evidences of inflammation being most marked in the lower portion. The vagina was, particularly near the vulva, also in a state of intense inflammation, and had sloughed considerably on its anterior wall.

SIMPLE PNEUMOTHORAX, WITH COMPLETE RECOVERY.

By SAMUEL WILKS, M.D., F.R.S.,
Physician to Guy's Hospital, etc.

CASES of this kind are sufficiently rare and remarkable to warrant a record of them in the JOURNAL. Besides the case presently to be mentioned, I have never seen but two other examples of the kind, pneumothorax being nearly always associated with well marked phthisis, empyema, or injury. The first case was that of a young man who, whilst engaged placarding the walls in his avocation of bill-sticker, suddenly fell to the ground, and was brought to the hospital in an apparently dying state. He was gasping for breath, which was immediately seen to be due to a rupture of the lung, as the left side of the chest was universally tympanitic. Paracentesis was discussed; but, as he soon rallied from his collapsed condition, it was postponed. On the following day, the disturbed circulation had become somewhat restored, and he then made a speedy recovery, without a single symptom denoting any pulmonary or pleuritic disease.

The second case I saw was under the care of the late Dr. Hughes, and occurred in an elderly man who had been the subject of winter-cough and shortness of breath. He was suddenly seized with intense difficulty of breathing, which was found to be due to an universal pneumothorax on one side. He was previously well, had no symptoms of any pulmonary disease, and made a complete recovery. Dr. Hughes suggested that he had ruptured a bullous portion of an emphysematous lung.

The following case I saw in consultation with Mr. Halls, of Horsley-down and Croydon, who has furnished me with the following particulars. Mrs. P., aged 30, eight months advanced in pregnancy, was quite well up to May 7th, when she thought she took cold from sitting near an open window; but she was not ill enough to seek advice or keep indoors. On the 17th, she was seized with difficulty of breathing, and sent for Mr. Halls. He found her suffering from great distress of breathing; and, on examination, that she had complete pneumothorax of the left side. She was continually coughing, which seemed to be of a nervous or spasmodic kind. These symptoms continued, and on the 19th I saw her. The breathing was very quick and gasping, as of impending suffocation. The whole of the left chest was hyperresonant, and not the slightest breath-sound could be heard. On coughing, no metallic sounds could be detected, or other signs showing a present communication between the lung and pleural cavity. The chest was of normal size. The question of treatment was anxiously discussed. We considered that, if there had been good evidence of the existence of a hole in the lung, and if at the same time the chest had been bulging, we should have been warranted in tapping the patient; for, even had we made a free communication between the chest and the external air, this condition would have been better than one where air was forcibly pumped into the chest and was exerting a baneful pressure on the heart and surrounding parts. If, as we believed was the case, the ruptured lung had already closed, there arose the question of the propriety of tapping the chest by a valvular trocar or aspirator, so as to pump off the air and allow the compressed lung to expand. As, however, the dyspnoea was less urgent than at the onset, and the circulation had already partly accommodated itself to the altered circumstances, we thought we would wait. We gave a doubtful prognosis, because we stated that, if the urgent symptoms passed off, it was probable that a pleurisy would result, and that months might elapse before recovery took place by means of contraction of the chest. Our fears were, however, falsified; she was soon afterwards delivered of a healthy child, and made a good convalescence. She went into the country; and, when she returned three months afterwards, Mr. Halls found her perfectly well. She could walk uphill without any difficulty; her breathing was natural; and, on examination of the chest, there was a good natural breath-murmur all over the chest. I saw her to-day (in the beginning of December), and she was quite well.

ON THE DURATION OF AN IMPRESSION CAUSED BY PRESSURE ON THE SKIN.

By ALEXANDER FLEMING, M.D., F.R.C.P.,
Consulting Physician to the Queen's Hospital, Birmingham.

IN the examination of applicants for life-assurance, I have for many years made a practice of observing the mark on the forehead caused by the pressure of the hat, and noting the degree of impression and the length of time required for its effacement—the intensity and permanence of the mark, like the indentations on the side of the tongue, for the most part indicating debility or want of tone. The observation thus in some degree helped me to a knowledge of the constitution of the applicant; but, as will be readily understood, the mark varies much with other circumstances influencing pressure on the forehead, as the shape of the head, the form and material of the hat itself, and so lessening its utility as a sign. These observations led me to think that some useful hints in practice might possibly be obtained by determining more accurately the degree and duration of an impression on the skin produced by pressure. Hence my reason for devising the instrument represented in the adjoining figure (1), which is about one-fourth of its real size.

Fig. 1.

The instrument consists simply of three weights, of 1 lb., 8 oz., and 4 oz., sliding over a central rod, and fixed by a screw at the top: the entire weight is thus 1 lb. 12 oz. Below is a stamp (see fig. 2), one inch in diameter, and divided into four compartments. The points and radiating lines of the die are flattened, while the rings and the transverse lines have a sharper edge.*

Fig. 2.

The impression on the skin is produced solely by the weight of the instrument, the strap serving simply to keep it in place. It may be applied to the forehead, the fore-arm, or the back of the hand. In making an observation, I have found five minutes to be the most suitable time of application. At the end of that time, a well marked impression of the die is produced on the skin, and occasionally the surface is at the same time a little reddened. The time required for the effacement of this impression varies much. I have seen it pass away completely in three minutes, while in other cases traces of the mark may be observed for twenty or even twenty-five minutes. The more vigorous and the more healthy the individual, the more quickly is all trace of the impression removed.

These observations can only be made satisfactorily in the wards of a hospital; and, unfortunately, very soon after I had commenced to make them, my health gave way, and I have not since had an opportunity of resuming them. I notice the subject now, chiefly in the hope that some young hospital physician may be induced to resume the observations, and conduct them on a scale sufficient to determine the practical value of the indications thus furnished.

Had I been able to prosecute the subject, it was my intention to examine the effect in health, on the time required for effacement, of heat, cold, electricity, fatigue; of stimulants; and of several medicines, as iron, antimony, opium, atropine, and strychnia; as well as to note the changes produced by acute and chronic diseases.

* The instrument was made for me by Messrs. Salt and Son, Bull Street, Birmingham.