vomiting continued almost without interruption until his death a few hours afterwards.

Necropsy.—The body was remarkably well developed. There was considerable excess of subcutaneous fat generally. The pericardium was healthy and there were no adhesions, but there was an area of recent ecchymosis over the middle part of the left coronary artery. Externally the myocardium appeared healthy, with the exception of a softened area round and including the area of ecchymosis described. All the valves of the heart appeared healthy and competent. There was a flattened recent but adherent thrombus in the right auricular appendage. There was much fatty deposit over the ventricles. The aorta was much dilated throughout and showed advanced patchy atheromatous degeneration at all parts with considerable calcareous deposit. Dissection of the left coronary artery showed its orifice quite free, but about half an inch distal to this, and after the origin of two branches, the vessel was completely blocked by a thrombus which extended from this point for nearly half an inch. The thrombus seemed to have originated from a hard calcareous patch at this portion of the vessel. Beyond the thrombus the artery was unobstructed, but here again it showed advanced calcareous change. The right coronary artery was free, but its lumen was distinctly narrowed from similar calcareous deposit. In the lower half of the interventricular septum there was extensive necrosis of the myocardium, in the centre of which was a large, irregular, gaping orifice which led directly into the right ventricular cavity, the opening being much larger on the left ventricular aspect. (See Fig. 2.) Almost the entire

FIG. 2.

lower half of the septum was of a yellowish-white colour from anæmic necrosis; to the touch this part was very soft, and it broke down on slight pressure. At all other parts the myocardium appeared quite healthy. The stomach showed a recent shallow ulcer involving the mucous membrane only. Apart from this the other organs of the body appeared healthy.

These cases are rare enough to be worth putting on record; while the only symptom complained of in both—viz., epigastric pain—is also worthy of note.

The photographs illustrating the cases here reproduced were taken by myself from sketches made from the organs shortly after the necropsies by my assistant, Dr. A. M. Kennedy.
Glasgow.

INVALID CHILDREN'S AID ASSOCIATION.—The annual meeting of this association will be held by kind permission of Lord and Lady Newlands at 16, Grosvenor-place, S.W., on Tuesday, May 25th, at 3 P.M. Field-Marshal Lord Grenfell will preside. Tickets of admission can be obtained on application to the secretary at 69, Denison House, Vauxhall Bridge-road, S.W.

BILHARZIA HÆMATOBIA AND CIRCUMCISION.

BY JAMES F. ALLEN, M.D., M.Ch. R.U.I.

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THE generally received view of the method of entrance into the body of the bilharzia is that it gains an entrance into the stomach through the water taken for drinking. But a careful observation of the condition of bilharziosis extending over many years has led me to be more convinced as I proceeded that in every instance the parasite gains access to the body while those affected are bathing, and in the great majority of instances, in Natal anyway, that invasion took place through the urethra alone. It is possible, and I think sometimes happens, that it also enters the rectum and intestinal canal by the anus, and it may enter the lungs by infested water being sniffed into those organs while bathing, though I have never met with such a case. But wherever it is found it has got to its final resting place directly from outside and has not reached it from the vascular system. There can be no doubt but that the parasite does enter the stomach in drinking water, but it appears pretty certain the gastric juice destroys it, and that therefore it does not penetrate the tissues of that organ, reach the great veins, and so travel to its final destination. It is difficult to understand how it could ever have been maintained that so great a parasite possessing such immense fecundity and so large an egg many times greater than a blood corpuscle, and with a very hard shell, could exist in the great veins and life be continued; not only life, but good health. In my long experience in Natal I have never met with a fatal case, but, on the contrary, many recoveries.

In this inquiry it is a matter of first importance to establish the mode by which the parasite does reach its destination, for once the way by which it gains an entry into the body is discovered some means may be devised of protection. Under the received view, if incorrect no advance can be made, and the gravity of that opinion being very great causes much mental uneasiness and in some instances material loss, for if it was the case the lives of those affected ought not to be assurable; but as a matter of fact under the real state of things the parasite does not affect longevity; and finally, it is always necessary to get at the truth. I propose therefore to make another attempt to establish the real mode of entry.

In those localities where the bilharzia is prevalent the invasion of the parasite is for the most part confined to those who have contracted it when children and is almost altogether found among males. Adult invasion, though occurring under certain conditions, to which I will presently refer, is comparatively rare. The children, and for the most part the adults, in whom it appears are almost invariably persons who are in the habit of bathing in infested streams. If therefore the population of a bilharzial district was divided into river bathers and non-river bathers it would be found that the great majority of river bathers had become invaded, and of those affected nearly all contracted the condition under the age of puberty and were males; thus, evidently habit, sex, and age are predisposing causes. In their bathing habits little boys of this country are much the same as elsewhere; they go during the warm weather frequently to the river, stay long in the water, and rarely dry themselves with towels when they come out, and they do not wear bathing drawers. The influence of sex is not as great as would appear from the preponderance of boys affected. I think boys are more susceptible, but even of that I am not sure, they certainly offer more facilities for the entry of the parasite. The real cause of the excessive number of boys affected is that they more frequently bathe in the open streams than girls and that they mostly discard the use of towels. Thus the parasites are able to cling to the parts of their bodies which facilitate invasion.

Age undoubtedly does influence invasion, the great majority of those affected being boys under the age of puberty. The bathing habits of the boys to some extent account for this; but it is mainly due to the ease with which the parasite can enter the urethra before the prepuce is retracted. There can be no doubt but that the prepuce plays a most important part in the entry of the parasite

into the urethra. During the act of bathing the sack formed by the prepuce becomes filled with water, and if the distoma enters with it it is obvious it would be guided almost directly to the mouth of the urethra by the prepuce and sustained until it effected an entry. It is also a fact that for some time after boys leave the water the prepuce has not quite emptied itself, and that it would protect anything beneath it from being removed or destroyed by friction with the clothes and also from the effects of drying. A parasite so placed would therefore have moisture, guidance, protection, and time, everything, in fact, to enable it to seize upon a position which suits it so admirably—advantages which parasites never fail to avail themselves of; and in this instance their subsequent history makes it certain that they take full advantage of the opportunity. In this manner, in most instances, the bilharzia enters the body.

It is also my experience that adults in whom the prepuce has not retracted, but has remained covering the glans penis, are, when exposed to the bilharzia by bathing in infested streams or water, most liable to invasion, and that those who have the prepuce retracted are not. In girls I think the labia offer nearly as good sheltering places, but their more frequent use of the towel and the shorter time they spend in the water in home bathing give them the greater immunity from invasion they seem to possess, and their escape points out the simple method by which boys may also be protected. It is protracted bathing and the impossibility of drying the glans penis on account of the prepuce which make boys so susceptible. The history of the condition as presented by its symptoms also points conclusively to urethral entry. The first marked symptom of invasion is the passage of a little blood, sometimes appearing as a urethral discharge unconnected with micturition; with this there may be some irritation of the passage but rarely pain. There is also hæmaturia: that is after passing urine apparently free from blood some bloody urine is discharged towards the finish, and a few drops of almost pure blood at the end. If at this stage a catheter is inserted it will be found when the point of the instrument gets to the membranous portion of the urethra an obstruction to its further progress will be met with, which often makes it very difficult to pass a catheter, and any attempt to do so causes much bloody discharge after the instrument is withdrawn. Here, then, is the first colony established by the distoma. Like all parasites the bilharzia chooses a position where it is protected and it can get most freely all the nourishment it requires; in the membranous portion of the urethra it finds security, steadiness, and sufficient vascularity which no doubt determines its selection. I have never found the parasite much lower down. It is not often that urethral invasion alone is met with; though there are many such cases they do not come to the notice of the medical man.

The question now arises, Does the parasite migrate from the urethra after it has fixed itself there? I do not think it does. Colonies higher up the urinary tract are, I believe, always due to further invasion. This conclusion I have come to from the fact that in those cases of urethral invasion alone, where the further entry of the parasites has been checked, no symptoms of colonies higher up have occurred and these signs are so definite that they could not be overlooked. But if exposure to invasion continues very soon it will become apparent that the bladder and ureters are occupied; when that takes place visibly bloody urine is frequently voided; that is, all the urine is bloody, which is never the case in urethral occupation alone. In the latter case the urine does contain blood, but it must be sought for with a microscope. The visible blood follows apparently clear urine. When the bladder is occupied the quantity of blood is greater, and it is thoroughly mixed with the urine, though sometimes almost clear urine may be passed; and there are also symptoms of irritation of the bladder, which are absent in urethral occupation. So that it is easy to discriminate between the two. As invasion passes higher up and the ureters become affected the urine is more often visibly bloody, but that would alone hardly distinguish the condition from bladder occupation, but that a new set of symptoms arise which are never found in either of the first two stages. The sufferer in the third stage—that of ureter occupation—for the first time becomes subject to attacks of nephritic colic, often of a very severe character, simulating the violent colic attending the passage of a calculus through the ureter, but in the

case of the parasite, only due to spasm of that tube, caused by irritation at the point where the colonies exist, the result most frequently of some change in the urine. It is also probably in a measure the result of shaping and stretching due to muscular exertion. In boys these attacks almost always follow such games as football and cricket, or after ordinary running, riding, or swimming, &c. Probably excessive perspiration on such occasions makes the urine scanty, stronger, and irritating; sometimes over indulgence in food will have the same effect. That the pain is caused by spasm alone is shown by the fact that it is specially and completely relieved by an injection of morphine and copious watery drinks.

Thus there are three well-marked stages of the invasion, at any of which the parasite can be stopped if further invasion per urethram can be checked, as it can be either by change of residence or precautions directed to keeping the parasite from entering the urethra. Indeed, by the symptoms we can follow the invasion upwards, almost as clearly as if we were watching the progress of the parasite through a transparent medium. The occupation appears to be from without inwards and not from the kidneys downwards. Had the invasion taken place by drinking water through the stomach, and had the parasite penetrated the tissues of that organ and so gained access to the great veins and thus reached the urinary tract, the order in which the occupation occurred would not invariably be, as it is, from the urethra to the kidneys—some variation would be certain to occur. Indeed, the reverse order, from the kidneys to the urethra, would be much more likely. Very suggestive of entry by the urethra as the foregoing is, more convincing still is the fact that the invasion can be stopped at any of its stages by means directed to exclude the parasite from entering the urethra, and that would certainly not be the case if the parasite existed in the vena cava and other great veins.

The next important point to decide is whether or not the bilharzia can reproduce itself within the body. The fact that the advance of the parasite can be stopped when the invasion is checked is alone sufficient to disprove that. But its long life within the body, even when entry has been stopped, is in itself suggestive of the power of reproduction. It is therefore necessary to consider everything which tells against such a supposition. The vitality of the parasite can be watched, extending over a series of cases, if a sufficient number can be observed, in much the same way as if a single case was examined over a period of years. Then by the use of the microscope very definite conclusions with regard to the vigour of the parasite can be arrived at.

On the first invasion of a boy under the age of puberty the eggs will be seen under the microscope to be very numerous, large, with strong shells, well-marked spike—I have never seen one with a hook—and nearly all contain vigorous embryos, and there is also marked hæmaturia. After puberty, when the prepuce has retracted and the sufferer has ceased to bathe in the infested rivers, confining himself to the use of a bath in his house and drying himself carefully with a towel, and by these simple measures stopping the entry of the bilharzia, in the great majority of such cases invasion ceases, and the parasites begin to show signs of deterioration. The acute hæmaturia begins to abate, and as time goes on it is necessary always to use the microscope to find any trace of blood. A gradual change is taking place in the production and character of the eggs. They become far less numerous, diminish in size, lose the spike, have thinner shells, and do not often contain embryos. But there are other cases, unfortunately numerous enough, where the prepuce after puberty still covers the glans penis, and the habit of bathing in infested rivers is continued, but the use of a towel quite ignored. In such cases invasion still continues, and if the urine is examined, say after ten years' duration of the invasion, when the host being 20 years of age, it will be found that among the smaller eggs, evidently the product of parasites long in the urinary passages, there will also be the large strong-shelled eggs of the new arrivals. Anyone familiar with the examination of bilharzial urine under the microscope can easily distinguish the three conditions of occupation. The first, of active invasion, with all the parasites vigorous and the eggs numerous and strong; the second, in which invasion has stopped and gradual deterioration is taking place, indicated by the lessening number, size, condition, and vitality of the eggs; and the third, where invasion still

continues after years of occupation, eggs showing deterioration will be present, together with those of vigorous parasites. In those cases where invasion has been stopped and the parasites are dying, the irritation caused by their presence ceases long before the bilharzia wholly disappears. In the majority of such instances the host is quite unaware that the parasite still clings to him and is much surprised to hear that its eggs can be found in his urine.

The embryo itself does not appear to be capable of completing its development in the human body. It is not often seen in the urine free from the egg; it dies too quickly in that liquid to admit of its being easily found. To get the embryo, an egg in which one is seen moving must be selected. The shell is then broken by careful pressure on the covering glass with a strong needle and the embryo will gradually protrude itself from the fracture; if the opening in the shell is small it elongates itself until it is free, when it quickly regains its circular shape. It presents the appearance of a small ball, covered with villi. When it first leaves the shell it swims about freely and briskly, actively moving its villi; but in a few minutes even under the most favourable conditions of heat and moisture it becomes stationary, moves its villi for a little, and dies. It does not seem to possess any power of attaching itself to the tissues or of penetrating them. Altogether it seems very unsuited to its environment. If it does fasten itself to the tissues it must be quick about it, for it dies in a few minutes in urine, and it certainly will not develop in it, nor can it do so in ordinary river water; it evidently requires some host other than the human body to enable it to develop into the adult distoma.

To establish the fact that the parasite cannot develop within the body adds immensely to the importance of the discovery that it can be prevented from entering it. If it could attain maturity there, as far as the afflicted were concerned, whether or not it could be excluded mattered but little, as they would have within them sufficient to make their case hopeless. But if invasion can be stopped, and if development in the body is not possible, those afflicted with bilharzia may be easy in their minds. It therefore seemed to me most desirable, if possible by some direct method, to make the fact clear that development within the body was impossible. I was fully convinced by the foregoing that it was not, but still I wanted some direct proof. I therefore determined to experiment upon someone who was well acquainted with the condition and would be willing for a consideration to run the small risk of invasion. Such a man I found among the Indian attendants at Grey's Hospital in this town. On three occasions I injected into this man's bladder many eggs of the parasite containing vigorous embryos, and I satisfied myself that he retained these eggs for several hours, but the result was absolutely negative. The man did not become affected with the bilharzia and I had him at the hospital for some years afterwards and he left free from the parasite. This experiment, taken with the indirect evidence I have produced, seems to me quite conclusive. In 1887 I reported to the corporation of this town on the local prevalence of hæmaturia, its origin, cause, and effects. At that time I took a much more serious view of the condition than longer experience has led me to form. In that report I pointed out the important function the prepuce performed in assisting the parasite to enter the urethra. I will quote the final paragraph of that report:—

There is an obvious means of protection, and one which must have been known in ages long past—that is, circumcision. It is very probable that in ancient Egypt the presence of this little fluke (*bilharzia hæmatobium*) in the waters of the Nile suggested the adoption of the operation and that the Jews, who have faithfully preserved it, adopted the custom and carried it with them when they left Egypt, and that gradually the cause of its origin became forgotten, and it advanced from being a sanitary precaution to a religious rite. In other parts of Africa where the fluke exists circumcision is, or has been, practised: at the present time in our own neighbourhood, among the Basutos, and at one time almost within the memory of living men among the Zulus. If these and other peoples of the Abantu race really did migrate south from the valley of the Nile, they like the Jews, carried the custom with them. But wherever it was instituted, whether in the valley of the Nile or among the hills of South-Eastern Africa, it is extremely likely it was originated as a protection against this fluke, and it will have to be practised again if the European, or indeed any, race is to maintain its normal vigour in the infested countries.

A short time after that report was published a correspondent sent me some very interesting information. He stated that beyond doubt circumcision was practised in Egypt from time so remote that there is no record of its origin, but that sculptures exist dating 2000 years before

the period of the captivity of the Israelites on which prisoners of war are depicted in the act of being circumcised, the operation being clearly delineated with a heap of prepuces beneath the victims, and that there is also a sculpture showing the god Ra undergoing the operation. The practice even at that early date may have become a religious rite, but it is more than possible it was not and that its protective influence was well understood. The fact that prisoners of war were circumcised wholesale on their arrival in Egypt seems to point in that direction. These people would occupy a servile position and would have to work in and about the Nile, and it is quite certain had they not been circumcised the greater number would have become invaded by the bilharzia, which would materially reduce their value as slaves. A man who gets thoroughly occupied by that parasite, and in whom the invasion continues unchecked, cannot do hard work, and it is also certain that after circumcision a very large proportion would escape, and that if they were instructed still further to protect themselves by wearing a loin-cloth while in the water and drying themselves when they came out, none would have become invaded, and the people who could invent circumcision as a protection must have known something of the cause of the hæmaturia and would be likely to adopt such further simple measures to make immunity complete.

What can be more likely than that this operation was performed on the Israelites 2000 years later than the date of the sculptures, for a like purpose with the full knowledge of its beneficent purpose. The glimpse of the Israelites in Egypt we get in the Bible shows that they were in a servile condition there, and they would have had to submit to the customs of the country. Herodotus says that at his time the Egyptians were remarkable among all other races of the world by the practice of this custom, and that the Syrians (Israelites) had adopted the operation from them. He also mentions that the Ethiopians had the same custom, but whether they learnt it from the Egyptians or the Egyptians from them he was not sure. He states no reason for this strange practice, but it was remarkable enough to be mentioned. And it may at that time even in Egypt have become conventional, the knowledge of its wise protective influence being completely lost. That the god Ra, the sun-god, should be depicted as being circumcised was surely symbolical of some great benefit which the operation would bring on all men in his land of Egypt. Perhaps, now that I have suggested the origin and use of this peculiar rite, Egyptologists may throw some further light on the subject.

It seems to me that the practice of circumcision should be enforced in every country where the bilharzia is prevalent. But that being a counsel of perfection, I need not hope ever to see it carried out. In Ancient Egypt, as in Natal to-day, I have no doubt it was found that girls escaped invasion. We are told in the second chapter of Exodus that "the daughter of Pharaoh came down to wash (herself) at the river." If that means she bathed in the Nile, it is quite certain that she must have dried herself thoroughly with a towel when she came out, or she may have worn some close-fitting protective garment, otherwise she ran great risk of being invaded by the parasite.

In this country anyway, if girls bathe in infested streams, and do not wear some kind of bathing gown, and also fail to dry themselves with a towel when they leave the water, as little girls sometimes do, they become invaded by the bilharzia. But if they bath in their houses in water from the same source, and dry themselves with a towel, they escape the parasite. As this is the general practice with nearly all girls, and they have almost complete immunity, they do not need any further protection. Practically it is only boys who need to be warned to guard themselves against the entry of the parasite. And as I cannot hope that the method by circumcision will be generally adopted, I must be content with recommending the less classical means: by wearing close-woven drawers that fit tight round the waist and round the thighs and are not open elsewhere, and drying the body well when they leave the water especially, and as closely as possible, about the orifice of the urethra. These simple directions will save many boys and adults whose physical condition makes them very liable to invasion and will give absolute immunity to those who, fortunately for themselves, may be circumcised or resemble those that have been. And to those who may be suffering

from the parasite, though I cannot recommend them any sovereign remedy, I can truly bid them not to be disheartened. Their condition is not such as they have been led to believe, and each day that they protect themselves from invasion brings them nearer the time in which they will almost forget that they were ever affected by the *bilharzia hæmatobia*.

Pietermaritzburg.

RUPTURE OF THE PREGNANT UTERUS FROM CONTRECOUP IN A WOMAN NOT IN LABOUR; OPERATION; RECOVERY.

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THE following case appeared to me of sufficient interest both from the rarity of the accident and the concomitant symptoms to warrant publication.

On March 8th, 1908, the patient, a healthy VI.-para, when seven months advanced in pregnancy, fell from a first-floor window, from 12 to 14 feet high, on to her buttocks; she remembered striking on an oaken edging to the garden path. She was seen by Dr. P. N. Randall of Bromley (to whom I am much indebted for the following notes) about an hour and a half after the accident. Her pulse was fairly good; she was conscious, but in great pain in the right side of her abdomen. Fœtal movements had been felt immediately after the accident but not since. There was no definite paralysis of the legs but she was unable to move them in any way and it was necessary to draw off the urine by catheter twice daily for the 16 days subsequent to the accident. Three days after the accident (the 11th) she developed acute bronchitis, and eight days after (on the 16th) a little blood escaped from the vagina for the first time and gradually became more free.

The patient was seen in consultation on March 18th, ten days after the accident. She was a spare brunette and looked ill; her respirations seemed quicker than normal, and her pulse was feeble (104). There were loose râles heard over both lungs. On inspection of the abdomen it presented none of the features of a seven months foetation, and coils of intestines were very distinctly seen through the thin abdominal walls. There was no distension and no tenderness on pressure. No fœtal heart sounds could be heard, but a distinct uterine souffle could be made out to the left of the median line in the lower hypogastrium. The areolæ were stained but the breasts were not active. On palpation of the abdomen there was an absence of the usual uterine tumour halfway between the navel and the epigastric notch. Extending from the lower edge of the liver to the right inguinal region there was an irregular, somewhat ill-defined swelling made out. Some prominences were noticeable upon its surface. A fœtus could be palpated with its face looking to the left. In the lower hypogastrium and in the median line could be felt a soft, elastic, globular swelling, reaching halfway between the symphysis and the navel; this gave the sensation to the touch of a uterus recently emptied of its after-birth, or the uterus of a far-advanced extra-uterine pregnancy. Per vaginam, a slight mucous discharge with a little bloodstain mixed with it was going on; the cervix was soft and admitted the finger to the internal os uteri. The swelling felt in the lower hypogastrium was clearly the uterus; the mass in the right groin could not be clearly defined; the left loin and fornix appeared to be quite free and healthy. Extending from the uterus, across to the swelling in the right loin, was an indefinite mass which appeared to have a slight amount of restraining action on the mobility of the uterus.

It was considered that the case might be: (1) one of ruptured uterus with the fœtus lying among the intestines on the right side; (2) the possibility of a primary abdominal extra-uterine foetation; or (3) pregnancy in a bi-cornuate uterus. It was considered that the case would possibly be elucidated by the passage of the sound; this

was found to pass easily into the uterus and considerably beyond the fundus; its point could be felt immediately behind the thin abdominal wall about three inches above the umbilicus; it appeared to pass in front of the fundus uteri.

The patient was anæsthetised and the finger inserted into the cervix. After a little upward pressure, about two inches above the internal os uteri, a ragged, longitudinal opening was felt and a lobe of separated placenta impacted in it; no liquor amnii or foetal parts could be made out *in utero*, but in the right inguinal region what appeared to be a leg could be palpated by the finger in the uterine cavity, showing clearly that it was outside the uterine wall. Diagnosis was therefore made of ruptured uterus, probably of the anterior wall, the dead fœtus lying in the right side of the abdomen. The abdomen was opened in the median line. On reaching the subperitoneal fat it was found to be yellow and parchment-like, and the peritoneum itself very soft and breaking down on touching. On opening the cavity a considerable amount of dark blood-stained fluid escaped and the uterus was seen immediately beneath the incision. An irregular longitudinal opening, with retracted edges, was noted at the lower end of the incision wound; on the right a female fœtus with the skin macerated was seen lying among the intestines; the great omentum was deeply stained a brown colour. On passing the hand into the peritoneal cavity the fœtus was felt lying on its left side, with the head in the epigastrium, the face towards the anterior abdominal wall, its right shoulder under the liver, and the buttocks and legs in the right iliac fossa, the head being somewhat moulded by the cleft in the liver. The placenta was lying across the front of the uterus, a small portion of it occupying the laceration already spoken of in the anterior wall of the uterus; this was obviously what was felt interfering with the mobility of the uterus. It was quickly removed, the uterine cavity carefully explored, and some small pieces of adherent placenta removed. The fœtus was lifted out through the abdominal wound, some large blood-clots were taken out with sponges, and the uterus, in a fairly good state of contraction and retraction, was brought to the surface. The sloughing edges of the uterine wound were pared carefully and brought together by two layers of superimposed silk stitches. The parietal peritoneum was then stitched to the sides of the uterine scar (abdominal suspension) and gauze drainage was applied. The abdominal wound was then closed. During the operation nearly three pints of saline fluid were injected into the cellular tissues of both breasts and the peritoneal cavity. The condition of the patient at the end of the operation was fairly satisfactory and she was got back to bed, with a pulse of 110 per minute, of a feeble but regular character. The fœtus showed no abnormalities of development; it weighed 3 pounds 13 ounces and the skin was peeling.

The post-operative history was uneventful. The bronchitis slowly cleared up, the patient's temperature remained below 100° F., and her pulse gradually descended to normal. I saw her again on Jan. 13th last (about ten months after the operation). I then found the scar quite healthy, the uterus a little bulky but freely mobile, anteflexed and anteverted, and the patient's only complaint was that whereas before the accident she had had painless menstruation she now suffered from colicky pains in the lower hypogastrium during the whole time of the flow.

A few points in the history of this case seem worthy of attention. It may be noted that a woman with a ruptured uterus for 10 days, the fœtus, blood, liquor amnii, and the larger portion of the placenta lying in the peritoneal cavity, showed no indications of acute peritonitis or any general symptoms of importance. It is possible that the impaction of the soft placenta in the longitudinal rent in the anterior wall may have in some way prevented the entry of germs into the peritoneal cavity and so saved the patient an acute illness as well as have arrested hæmorrhage. The position of the rent was an unusual one and must have been caused by the reflected impact of the child's body against the anterior uterine wall. I have been unable among more recent literature on the subject to find any case of a similar nature. The ventro-suspension was not in itself necessary, but it was thought desirable to cut off the laceration from the general peritoneal cavity. The dysmenorrhœa is probably due to interference with the bipolar action of the uterus during menstruation.

Brook-street, W.