patient. We get the same effect as in the treatment of septicæmia by saline infusions.

Dr. Lyle says that the infusion "has no immediate effect in controlling the convulsions, nor has it any effect on the action of the uterine muscle." As I have treated 25 cases of my own, and have been associated with others in the treatment of at least a dozen more, I may fairly claim to have had not a little experience in the matter. Whatever Dr. Lyle's experience may have been, mine is that there is a very marked influence on the fits. I have now treated a fair number of cases without giving anything to check the fits. The following may be taken as an illustrative case:

In the end of December Dr. Ramsay of Parkhead sent in a primipara who had been delivered under chloroform after having had one fit. The fits recurred about an hour after delivery, and she had had twenty by the time she reached the hospital. She had two more before the nurses had finished washing her. She was deeply comatose. The excretion of urine was almost suppressed. The albumen stood slightly above the U mark in Esbach's albuminometer. Four tablespoonful of salts were poured into the stomach through a tube, 2 pints of infusion given, and a hot pack applied. Two and a-half pints of infusion were given six hours later, and 2 tablespoonful of salts. She never had another fit. In the first nine hours 16 ounces of urine were drawn off, so the kidneys had quickly reacted to the infusion. In the next twenty-four hours 37 ounces were obtained, and the bowels had moved copiously seven times. In the following two days 168 and 212 ounces were collected.

If it was not the infusion which stopped the fits in this case, what was it? This is not an isolated case. As to any action on the uterine muscle, there may be none directly, but in so far as the woman's general condition is improved, there must be improvement in the uterine condition.

Dr. Lyle is to be congratulated on his results with morphine. I have used it frequently, but my results have been very unsatisfactory. He claims certain advantages for it. He says "it prevents excess of waste products being thrown into the blood." On what authority does he base such a sweeping assertion? That it has no effect on the kidney I am not prepared to admit. I am firmly convinced that it lessens excretion.

As to the obstetric treatment of the condition, my experience teaches me not to interfere if labour has not begun. During the first stage if the fits cease dilatation may be left to Nature, but if they recur the uterus should be emptied as quickly as possible. During the second stage delivery should be effected at once. When any operation is being done the patient should be put deeply under chloroform to lessen shock. To say that all my fatal cases were cases in which I interfered, and to infer that they would have done better if they had been left alone, seems to me to be hardly warranted. I think he will find that all the cases delivered forcibly did not die. In every case in which I interfered I had reasons for doing so; and although I lost some of them I am quite sure I saved others. It is the bad cases one has to deal with in this way, and if one loses some of them the interference must not be condemned.

Dr. Munro Kerr has collected all the cases of puerperal eclampsia treated in the Glasgow Maternity Hospital during the last fifteen years. He informs me that the death-rate among the cases treated by chloroform, chloral, and bromide, veratrum viride, or morphine, etc., was 47 per cent. The reason of this exceptionally high death-rate is that most of the cases are brought in after they have been convulsed for many hours. We rarely see them within twelve hours of the first seizure. Since the saline infusion has been added to the treatment the rate has fallen to 17 per cent. If there had been only 8 or 10 cases one might imagine it was a coincidence, but this could hardly happen with over 30 cases. The first year I began it we had 8 cases and 5 died. The 3 which recovered were the only ones in which the infusions were used, and they were not by any means slight cases. I leave these figures to speak for themselves.

A CASE OF PUERPERAL ECLAMPSIA AND ITS TREATMENT BY MORPHINE.

By GEORGE ELDER, M.D.,
Nottingham.

IN the BRITISH MEDICAL JOURNAL for November 24th, 1900, there is a paper by Dr. Fitzgerald on Puerperal Eclampsia, showing the value of morphine as the remedial agent, and it is

in further illustration of this opinion that I venture to submit the following notes of a case of Dr. Bloomer, of Long Eaton, to whom I am indebted for them, as well as for the opportunity of seeing the case.

Mrs. C., aged 35, primipara, was delivered on October 29th, 1900, of a child which was alive shortly before birth, but was stillborn. For two months prior to her confinement there had been swelling of the legs and feet, yet she did not consider herself sufficiently ill to seek medical advice. An hour after delivery the patient suddenly became convulsed, the attack being said to have lasted from 5 to 6 minutes, but when Dr. Bloomer saw her shortly afterwards consciousness had returned. Hot applications to the loins were ordered, and a dose of 20 grs. of chloral hydrate and 30 of potassium bromide to be given every four hours. During the six hours which followed, she had three seizures of increasing severity, when morphine gr. $\frac{1}{4}$ was administered hypodermically with the effect of stopping the fits and producing two hours' sleep. On awaking, she was very excitable and delirious, but there was no recurrence of the fits, and excepting night draughts of bromidia no further medicines were required. Her recovery was complete. With regard to the condition of the urine, no examination of it was made before labour, nor could there be for twenty-four hours after, as there was complete suppression; but when examined the following day, it was found to contain one-third of albumen. Writing two months after, Dr. Bloomer states that the urine still contains a trace. So far as the previous history of the case is concerned, it was elicited that no member of the family had ever been subject to fits of any kind.

A disease which kills 30 per cent. of the mothers, and those usually taken from the young and the healthy, and 50 per cent. of the children is one which must always have an urgent claim upon our attention, more especially as, in spite of all that has been written and said upon the subject during the last fifty years, we are still very much in the dark as to its nature, its causation, or even its treatment. We know it is due to some form of auto-intoxication, and that in the vast majority of cases this follows upon renal insufficiency either as an expression of a passing congestion or organic disease; still, this leaves a goodly number of cases unexplained.

The late Dr. Angus Macdonald pithily summed up the situation when he said that there might be albumen in urine without eclampsia, eclampsia without albumen, and eclampsia with albumen; and his still more distinguished fellow townsman, Sir James Simpson, gives instances in his *Obstetric Works* (vol. i) of fatal cases in which from beginning to end no trace of albumen could be discovered. It ought not to be lost sight of that, as long ago pointed out by Trousseau, highly-strung, excitable women are more predisposed to this disease than others. Still, after making due allowance for cases having other than a renal origin, the fact remains that the majority have that origin, and it cannot be doubted that if it became the routine practice for the urine of pregnant women to be examined at short intervals from the fourth month to the end of pregnancy many valuable lives would be saved.

Prophylaxis is what is wanted in the treatment of eclampsia. Putting the patient upon a rigid milk diet as recommended by Tarnier with such uniformly excellent results as soon as there is evidence of kidney failure, combined with other measures for stimulating the functions of the skin, the kidneys, and the bowels would, in the vast majority of instances, obviate the necessity of even considering the question of the destruction of foetal life by the premature induction of labour.

When, as in Dr. Bloomer's case and in Dr. Fitzgerald's, the medical attendant is suddenly brought face to face with a patient in convulsions, whether these be before, during, or after labour, no remedy is so quickly and certainly sedative as morphine hypodermically administered.

A CASE OF MULTILOCULAR CYSTOMA OF THE OMENTUM: REMOVAL: RECOVERY.

By

N. PERCY MARSH, and KEITH MONSARRAT,

M.B.Lond., F.R.C.S.E.,
Physician to the Children's Infirmary, Liverpool. Assistant Surgeon Children's Infirmary, Liverpool.

THE case is reported on account of its apparent rarity. We have been unable to find a full report of a similar growth. True, simple serous cysts of the omentum should not be designated rare in children, though they are by no means common, but the extent of the condition in this case, the

nature of the cyst contents, and the physical signs presented, are features which together seem to form a very unusual clinical picture.

A female child, aged 1 year 8 months, was admitted to the Children's Infirmary, Liverpool, on January 31st, 1899.

History.—About four months previously the mother noticed that the abdomen was enlarged, and brought the child to the out-patient department. She attended until admission. The notes then taken record that she was a well-nourished child, and that her abdomen was largely distended with what appeared to be free fluid. There was no complaint of pain. The abdomen measured $23\frac{1}{2}$ inches in circumference 2 inches above the umbilicus. The thoracic organs were healthy, the appetite good, the bowels irregular, the urine normal. The condition was thought to be probably one of tuberculous peritonitis. On March 8th, 1899, the abdomen was tapped with a Southey's trocar; this remained in for forty-eight hours, and 32 ounces of fluid were drawn off. The fluid was of a dark-brown colour, and contained "a little blood." The child was discharged from hospital on March 17th; she was readmitted on November 21st, 1899; the general health had been fairly good since leaving hospital, but on November 16th she complained of abdominal pain and lost her appetite. The bowels had been loose. The circumference of the abdomen was again $23\frac{1}{2}$ inches. On December 9th, a Southey's trocar was again introduced and left in for thirty hours. Forty-eight ounces of a dark fluid were removed. During the three weeks she remained in hospital at this time the temperature, with the exception of one day, was not elevated; the exception being on the night after the trocar was removed, when it rose to 101.8° .

The child was again admitted on August 7th, 1900. The general health had remained good, the appetite healthy, and she had had no pain. The abdomen was again tapped, and 40 ounces of fluid removed; this was dark reddish, alkaline, specific gravity 1020, and contained blood.

For the fourth time she was admitted on October 26th, 1900. She was then well nourished but anæmic. The mother could give no history of any illness other than or antecedent to that for which she had been under treatment. The bowels had latterly been regular, the appetite healthy, and sleep undisturbed. On October 27th a Southey's trocar was inserted in the mid-abdominal line between the umbilicus and the symphysis. Sixteen ounces of fluid came away, which on examination appeared to consist of pure blood. The next day, as no more fluid came away and the abdomen was still tense, an ordinary trocar and cannula was used. Before using this the abdomen appeared to be evenly distended with free fluid; both flanks were dull to percussion, and the dullness reached in the middle line from the symphysis to midway between the umbilicus and the ensiform. Twenty-eight ounces were removed by the trocar. In the middle line below the umbilicus a highly blood-stained fluid was obtained; it did not run freely, and some obstruction kept blocking the end of the cannula. The trocar was reintroduced at a point midway between the umbilicus and the right anterior superior spine; here an ounce of clear serous fluid was obtained but no more. Both samples contained a large number of cholesterine crystals.

Laparotomy.

After the fluid was removed, the left flank was noticed to be comparatively resonant as compared with the right, the child lying on her back. It was clear that the fluid was not free in the abdominal cavity, the possibility of there being a cystic growth of some kind present was discussed, and it was decided to open the abdomen. This was done on November 1st. A median incision was made, and subsequently enlarged to extend 2 inches above and 2 inches below the umbilicus. On opening the peritoneum a thin-walled cyst immediately presented, dark red in colour, and showing numerous vessels coursing over the wall. A trocar was inserted into this, and the wall grasped and pulled forwards. The growth was then found to consist of one large and many smaller cysts. Some of the larger secondary cysts had to be tapped before they could be delivered. When the greater part had been brought outside the abdomen, there were two attachments found, one in the right iliac fossa, and the other, forming a broad pedicle for the whole mass, consisted of the omental attachment to the greater curvature of the stomach. The adhesions in the iliac fossa were severed with scissors, as, though they appeared to be adventitious, the condition of the child did not permit of a prolonged dissection to free them. A few vessels were here tied individually. The omentum was then ligatured in sections along the greater curvature, and the growth freed. After sponging out some of the cyst fluid which had escaped into the abdominal cavity, the wound was closed by a single layer of silk-worm-gut sutures. While there was some tension on the pedicle, the child suffered considerably from shock, but when the operation was completed the condition was fair. A pint of hot saline solution was administered into the rectum immediately on return to bed.

After-History.

The following evening the pulse was 166, respirations 64; there was no sickness and no pain; at 8 P.M. the temperature was 101.6° . During the next day the temperature fell gradually, and on the evening of November 3rd it stood at 98° ; there was no subsequent rise. On November 15th she left hospital with a firm linear cicatrix, the abdominal walls being very lax.

She was seen by one of us on December 12th, and nothing abnormal could be detected in the abdomen. The appetite was good, bowels regular, and there was no trace of the anæmia which was present before operation.

Description of Cyst.

Examination of the mass removed showed it to consist of a large, thin-walled cyst capable of containing about 10 pints, and a number of independent smaller cysts, varying in capacity from about 8 ounces to a drachm. The fluid in some of the smaller cysts was a clear serum, but in all the larger was deeply tinged with blood. The secondary cysts were arranged as a fringe beyond the limits of the large cyst, but none were interposed between the latter and the line of section along the attachment to the stomach. Throughout the walls of the cysts, and especially that of the large cyst, were numerous ramifying, and anastomosing tortuous vessels.

The interval between the upper border of the large cyst and the greater

curvature of the stomach was about $1\frac{1}{2}$ to 2 inches; the transverse colon was not seen before the removal of the whole mass, it having a separate investment of peritoneum distinct from the omentum. Such an arrangement is a recognised variety (Luschka, Holden) of the disposition of the peritoneum in this region.

Histologically the wall of the large cyst showed externally an endothelial covering, internally a coat of fine connective tissue containing numerous blood channels. The walls of the smaller cysts showed the same structure, but the connective tissue coat was represented by a well-marked layer of fibrous tissue, the support given to the blood vessels being therefore firmer than in the large cyst, where the vessels were large and thin-walled.

Pathology.

The anatomy of the growth suggests an origin in some inflammatory condition in the lesser sac of the peritoneum. The several layers of the omentum, however, were not traceable in the cyst walls, and the growth cannot be properly described as consisting of encysted fluid in the lesser sac. Its proper designation is multilocular cystoma of the omentum, but the anatomy and histology furnish little clue to the exact pathology.

In the distended condition of the cysts there were no physical signs to indicate that the fluid was otherwise than free in the abdomen; both flanks were occupied by the growth, and from symphysis pubis to a point about midway between umbilicus and ensiform there was complete dullness to percussion.

When first seen, at the age of 16 months, the growth was sufficiently large to cause great distension of the abdomen; it must, therefore, have originated at a very early age or—perhaps more probably—have been congenital. The great vascularity of the cyst walls lends support to the suggestion of some inflammatory condition being associated with their origin, and such a process, antenatal, offers the most probable explanation of their etiology.

THE CAMPAIGN AGAINST AGUE.

By HERBERT E. DURHAM, F.R.C.S.

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THE importance of an efficient means of clearing districts of ague may now be said to be fully recognised. But the means whereby this is to be effected are by no means satisfactorily determined as yet. Some authors have urged measures specially directed against ague-bearing gnats, and others have summed up in favour of destroying the malaria parasite within its human host; furthermore, there are the advocates of isolation of ague-infected persons. In any scheme for the extermination of malaria the protection of the individual from gnat-bites, as by means of nettings, etc., will probably take but a small share in effecting the desired object: for the persons whom it is most desirable to protect are generally ignorant, and more or less uncivilised, as well as careless if not lazy, and they cannot be depended on to carry out any systematic self-protection. Many also of the more educated and intelligent inhabitants of a district cannot be trusted to afford their aid: however, here in Pará, there is a fairly general distaste for the familiarities of the gnat, and there are some who do not regard the so-called "mosquito theory" of the spread of ague as a mere fantasy.

TREATMENT OF GNATS.

Each locality in which *Anopheles* is found to breed in must be treated according to the possibilities of the situation. Thus the places in the outskirts of the city where I have met with *Anopheles* larvæ have been mere localised puddles, well adapted for the use of culicidal agents; on the other hand, drainage would have been impossible. It may be noted that cases of ague actually occurred in the neighbourhood of these pools. I was much struck by the apparent extreme localisation of *Anopheles* larvæ in one situation. This was a series of pools, where sand had been removed, in the near neighbourhood of some brickworks. Five of these were situated within a space of about 150 yards; they were similar shallow pools, of small extent. Only in one of these were *Anopheles* larvæ to be seen or caught, although all were inspected frequently, and the net used on several occasions during several weeks. The chief difference between this pool and the others was the absence of green growth, the water being thick and muddy. Before the pool dried up the *Anopheles* disappeared; but about this time they were to be found in another of the pools, the water of which had diminished considerably, and from which the green matter had largely gone (there was