was fortunate enough to obtain a specimen of urine from the child, and in both there was a considerable amount of albumen. Once before I was able to make the same observation, so that I am inclined to believe albumen will always be found in the child's urine.

In one case a dead child was delivered with both its arms perfectly rigid. In a fatal case of eclampsia I once before delivered a child in a condition of rigidity all over as if rigor mortis had set in. In one instance I have known convulsions occur in a child for a day or two after delivery. The toxin seems to affect the child's kidneys in the same way as it does the mother's, and it may not only cause convulsions but also the death of the child. It has been maintained that on the death of the child *in utero* the albumen quickly disappears from the mother's urine. In 2 of my cases the children were macerated, yet in both of them the urine was loaded with albumen. My experience therefore goes to disprove this assertion.

I sincerely hope that this method of treatment will be tried by others. I believe in it, and shall continue to use it until a better is brought forward. I have tried all the others, and none of them has given me as good results as this.

A CASE OF UTERUS BICORNIS ACCIDENTALLY DISCOVERED AFTER THE PATIENT'S FOURTH PREGNANCY.

By C. HUBERT ROBERTS, M.D., F.R.C.S., M.R.C.P.,

Physician to Out-patients, Samaritan Hospital for Women, London; late Demonstrator of Practical Midwifery, St. Bartholomew's Hospital.

THE following case may be of interest to some as illustrating the difficulty in diagnosing the condition, and in the fact that pregnancy had occurred with normal delivery from one half of a uterus bicornis several times before the condition was discovered.

The patient, I. L., aged 23, first came under my notice as an out-patient at the Samaritan Hospital in May, 1899, for a swelling in the anterior wall of the vagina and difficulty with micturition. Her own medical attendant, Dr. Dods, wrote saying that the swelling had caused great difficulty in delivery at her last confinement, owing to the fact that it had obstructed labour low down, presenting before the head at the vaginal orifice; delivery was eventually effected by powerful traction with the forceps. The swelling was cystic and very oedematous. At one time perforation of the head was thought necessary, owing to failure in delivery by forceps; but eventually these were successful. She made a good recovery from her confinement. This was her third full-time child, and was born on December 15th, 1898. Her two previous pregnancies had been fairly normal, but instrumental.

The swelling subsided more or less after her confinement, and gave her little trouble up to May, 1899, when she came to the hospital. It was then rather painful, and caused difficulty with micturition, and as it presented at the vulvar orifice she thought her womb was down.

On examination a rounded tumour was found occupying the anterior vaginal wall about the size of a bantam's egg, lying in close proximity to the urethra, just beneath symphysis pubis, and covered by normal vaginal mucous membrane. It was cystic, but was lying deeply beneath the vaginal tissue, and had evidently very thick walls. On pressure its contents could not be emptied into the bladder or urethra; a sound in the bladder found the swelling between it and the examining finger. The urine was alkaline, and the last drops of urine withdrawn by a catheter from the bladder containedropy pus. The swelling was exactly in the middle line of the anterior vaginal wall and a curvilinear median raphe or ridge of vaginal tissue extended right up from this to what appeared to be a normal cervix, suggesting an attempt at a double vagina. The colour of the vagina and cervix suggested pregnancy. There was a history of amenorrhoea of three months' standing, and the breasts were active. A swelling occupied the right iliac fossa which on bimanual examination felt like the pregnant uterus at three months.

She attended off and on during the next three weeks as an out-patient. She was finally admitted on June 23rd, 1899. The diagnosis was made of vaginal cyst or urethral diverticulum, and as it had caused so much trouble at the previous confinement it was decided to remove it. It was known that she was probably pregnant.

The operation was performed on June 25th. My colleague, Mr. Corrie Keep, assisted me at the operation. Under the anæsthetic the cyst was more clearly felt, and the longitudinal fold of vaginal tissue extending up to the cervix from this was well seen and very well marked. The cervix was closed, and appeared normal and single. The swelling in the right iliac fossa was carefully examined, and although it was thought probably to be the pregnant uterus, it rather puzzled us to account for its marked right-sided obliquity, and though mobile if displaced, it returned at once to its original position. The swelling felt like pregnancy, but it was very elastic, and the question of parovarian cyst was raised, considering that the occurrence of parovarian cysts with vaginal cysts was well known to occur in relation to abnormalities of Gartner's duct.¹ A smaller swelling could also be felt to the left of the larger one; but, as pregnancy was thought probable, no sound was passed.

The removal of the vaginal tumour was difficult, and after the vaginal tissues had been divided a large swelling of the size of a hen's egg was exposed; it had very intimate relations with the base of the bladder and

urethra; it was gradually enucleated, freed from its surroundings, and came away easily except for a deep attachment to the urethra, as demonstrated by the bladder sound. This attachment was of the thickness of the little finger, and on finally dividing it the urethra and a small portion of the base of the bladder were opened up, just admitting the tip of the finger, urine at once escaped. The hole was carefully examined and closed without difficulty by six or eight fine silk sutures, over which the vaginal flaps were now sutured; the bladder was tested, and proved to be completely watertight on injecting fluid into it.

The tumour removed was found to be an inflamed pouch or abscess attached to the base of the lower one-third of the urethra; it was very thick-walled, and contained a large, ragged cavity filled with phosphatic concretions and foul alkaline purulent urine. It communicated by a small orifice with the base of the urethra at the place where so much difficulty had been found in freeing the tumour from the urethral tissues.

We formed the opinion that the tumour was probably of congenital origin and that injury of confinements and frequent attacks of inflammation in the sac had increased its size, and that from time to time it communicated with the bladder, discharging its contents and leading to attacks of cystitis. It was not a dermoid.² It was impossible to avoid opening the urethra and base of the bladder during the removal, but these were at once repaired. (Some operators allow them to granulate up if cystitis be present.) Subsequently the patient did very well and the cystitis rapidly cleared up and she passed her water naturally after the first ten days (during which the catheter had been used). There was never any leaking of urine or incontinence. She left the hospital three weeks after the operation.

While the patient was in the hospital the swelling in the right iliac fossa gradually increased in size, and there was little doubt that it was a pregnant uterus, as other signs and symptoms of pregnancy were now marked, still it was not quite like an ordinary uterine condition even with marked right uterine obliquity. There had never been any hæmorrhage or discharge *per vaginam*, but the swelling was at times painful. Several of my colleagues saw her with regard to the swelling in the abdomen, and Mr. Doran, who saw her on July 15th, suggested tubal gestation, but thought that the right fornix was freer than usual for that condition. He did not advise operation unless severe abdominal symptoms occurred. The alternative diagnosis was normal pregnancy or parovarian cyst complicating pregnancy.

As the hospital closed in the middle of July I decided to send the patient home, as she lived quite near to the hospital. I heard nothing further of the case till August 1st (about three weeks after leaving the hospital), when Dr. Dods asked me to see the case again, as she had been losing a little blood *per vaginam*, and for the last few days the loss had been severe, and there had been pains in the abdomen like labour pains.

On examination I found that she was losing considerably, and that the cervix was now relaxed and soft, and easily admitted a finger, which passed into a cavity to the left, in which was discovered a mass like decidua, the sound passed 4 inches into this cavity to the left, the swelling to the right of this was larger than when she was in the hospital, and it was now quite clear that another cervical canal, which was closed, could be felt belonging to the larger swelling, and that there was a common cervix with a double uterine body (the finger now easily entering the left half, in which decidual tissue was felt) and that the right-sided swelling was certainly a 4½ months' pregnancy.

Mr. Doran saw the case with me, and agreed in the diagnosis of uterus bicornis unicollis, pregnant four and a-half months on the right side, and that the left half was now discharging a decidual cast. The left half was emptied, and several pieces of foetid decidual tissue removed. The finger in the left (now empty) half found it quite mobile and distinct from the other enlarged pregnant side.

As she had suspicious pains in the abdomen we both feared that she would miscarry from the right side very shortly. This proved to be correct; during the night of August 4th she miscarried from the right half, and a normal foetus about four and a-half months was passed. I saw her on August 5th, and finding the greater part of the placenta still *in utero* I removed it under chloroform.

The curious uterine condition was now quite apparent. There was a common cervix immediately above, which was a well-marked median septum, the finger passing on either side of it into one or other half of a uterus bicornis, the right half of which was well developed and in which this pregnancy (and probably the three previous full-term pregnancies) had developed. The walls of the right half of the uterus were of normal thickness and texture, and contracted well when the placenta had been removed; the left half was small and ill-developed, and felt like a long finger-like process. The halves of the uterus above the external os were quite distinct, and could be moved separately from one another. No recto-vesical fold could be made out between the two cornua.

The tissue removed from the left (smaller) half was carefully examined microscopically, but no villi were found; it had the appearance of an ordinary decidual cast. The tissue from the right larger half exhibited normal placental tissue under the microscope. The patient was rather ill for the first two or three days after the operation, chiefly from troublesome vomiting; she lost very little blood, and rapidly improved. The involution of the uterus appeared to take place normally. About a fortnight after the operation she had trouble with the bladder and another bad attack of cystitis, passing urine under her which was very foul. One night a supposed calculus the size of a large pea was passed, composed of phosphatic concretions which on being opened contained three or four fine silk ligatures probably from the original operation. After this the cystitis cleared up completely, and when I last examined her on September 5th she was quite well, and was going abroad for a holiday. There was nothing abnormal in the pelvis and the cicatrix of the bladder wound was quite sound, and she had perfect control of her water. The bilobed condition of the uterus was quite clear, but the cervix had closed up and appeared normal. Nothing of the septum could now be felt.

REMARKS.

The case is of interest, not perhaps on account of its rarity, but that the condition should have been only found out by

accident at her fourth pregnancy, which terminated in a miscarriage at four and a-half months, and it was due to this and during the manipulative interference necessary to remove the retained placenta and cast that the condition was discovered. Three full-time children had been born without the condition being suspected. In each case the pregnancy had probably formed in the better-developed right side.

The difficulty experienced in the hospital with regard to coming to a direct diagnosis of the nature of the swelling, which eventually proved to be the pregnant right horn, could thus be explained, and it is a thing to be thought of in the diagnosis of extrauterine gestation, and in a way it much resembles it; in fact, the diagnosis of this condition from interstitial and rudimentary horn pregnancies before the abdomen is opened is very difficult. The three conditions may be represented in the following diagrams:

In the diagnosis of the last two conditions the recognition of the point of insertion of the opposite Fallopian tube is of value, being low down in interstitial and relatively higher in rudimentary horn pregnancy; also the rudimentary horn pregnancy is sharply bounded everywhere, though connected by a band to the uterus, while in interstitial pregnancy the uterus is distended at one angle only.³ In this particular case quoted the diagnosis of extrauterine pregnancy was raised, and the true nature of the case was not discovered till the patient miscarried.

A point which should have led, perhaps, to a correct diagnosis was the occurrence of the well-marked raphe along the anterior vaginal wall from the vestibule to the cervix, suggesting a doubling of the vagina and consequent probable division of the uterine body, as of course the uterine septum could not be seen or felt till the cervix dilated during the miscarriage.

The urethral diverticulum was only an accidental coincident peculiarity, congenital or acquired. Abnormalities of the uterus are very manifold, and a great many variations in type exist, for which textbooks may be referred to. All deformities of the uterus are due to want of development of the ducts of Müller. Generally, during the first eight weeks the ducts are separate, at the end of the twelfth week the septum is absorbed, and at the end of the twentieth week the horned shape of the uterus disappears, the arbor vitæ can be seen, but the vagina is smooth. At birth the vagina is rugose and the uterus more or less rounded and firm.

Herman⁴ makes two classes of uterine deformity: (1) Those due to defect in the growth of the uterus; (2) those due to imperfect union of its lateral halves.

A complete summary of the subject would be out of place in the present article, but generally speaking uterine deformities may be classified somewhat as follows:

1. Absence of the uterus.
2. Rudimentary uterus—a mere nodule, from which fibrous bands run out laterally to the sides of the pelvis, partly horns and partly tube, the division being marked by the insertion of the round ligament as first pointed out by Virchow.
3. Fetal and infantile uterus, probably the commonest developmental defect, in which the body is very small in proportion to the cervix, or the uterus is all too small, or too thin, or there is no cavity to the uterine body, or the vaginal portion is very small and the body normal.
4. Absence or deficiency of one half (uterus unicollis).
5. Double uterus, of which there are three types.
 - (a) Uterus diadelphys—two halves quite separate, vagina double always.⁵
 - (b) Uterus septus or bilocularis (uterus normal externally but with two cavities). If septum between there is incomplete uterus subseptus.
 - (c) Uterus bicornis—union below but uterus double above; one horn is often better developed than the other, as in present case. A similar case is reported by Blondel⁶ of a case of uterus bipartitus unicollis and double vagina, which was only accidentally discovered after her second child was born. In this case there was a complete septum only at the lower part of the vagina; diagrams are given (p. 304).

In the *Archiv für Gynäk.*, vol. li, part i, 1899, another very interesting case is reported by Halban of uterus bicornis bicollis in Schauta's clinic, in which the fetus, developed in the left uterus, forced its way through the uterine septum, and was delivered through the right os. The empty cavity of the right uterus had been dilated with a laminaria tent, and scraped about the second month of the pregnancy in the left uterus without the least sign of threatened abortion following this treatment. During labour the lower edge of the torn septum was pressed by the fetal head on to the middle of the right os, which was taken for two, the true left being taken for a third os. The error was detected during involution, when the right os was seen to be torn, the "third os" found to be simply the left, whilst the middle os had disappeared; the laceration of the septum was now discovered.

1. With double cervix (bicollis).

2. With single cervix (unicollis).

With all these abnormalities of the uterus itself are combined defects in the vulva, vagina, ovaries, and tubes, which may be very complex.

It is to be remembered that defects in the uterus need not necessarily prevent uterine function; in the case mentioned in this paper pregnancy occurred four times.

Double uterus itself may give rise to very important complications, such as obstruction to delivery of the displaced empty half, obstruction due to the vaginal septum, double vaginitis or endometritis (one-half being overlooked), curious cases of alternating menstruation from each half with or without unilateral atresia and retained menstrual products, retained and undiscovered products of conception in one half in cases of double pregnancy, etc.

It is worth remembering that when pregnancy occurs in one half a decidua forms in the other; this was shed in the case related above before the miscarriage took place from the pregnant half.

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MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

TWO CASES OF BROMOFORM POISONING: RECOVERY.

CASES of poisoning by bromoform are somewhat rare, and as this drug is frequently used in the treatment of whooping-cough the following may be of interest:

A number of children in the same house, and of nearly the same age, were being treated by me for whooping-cough with half-minim doses of bromoform three times a day, suspended in mucilage of tragacanth. When called to two of the children about 12.30 P.M. I found them unconscious, lying side by side, with breath smelling strongly of bromoform, with faces pale, eyes closed, pupils contracted, and limbs flaccid. The respiration was feeble in the elder child (aged 4) and stertorous in the younger (aged 2); about 12.40 P.M. respiration ceased in the younger child, and artificial respiration was resorted to, and a few minutes later artificial respiration had to be resorted to for the elder. I gave each of the children about half a teaspoonful of brandy hypodermically, and then three injections of strychnine each at intervals of 15 minutes, to the elder $\frac{1}{100}$ th of a grain and to the younger $\frac{1}{200}$ th of a grain each time. I thoroughly washed out their stomachs two or three times with hot water, followed by strong coffee, some of the latter being allowed to remain in the stomach. The younger child rallied first, and began to breathe spontaneously after an hour and a half's artificial respiration. The interval was about the same in the case of the older child, but he remained drowsy and stupid for some hours. According to the nurses's account the children had their doses about 8 A.M., but these were the last in the bottle. Shortly after this they were put to bed, and on being awakened about 11 A.M. they were giddy and confused, and staggered in their gait. From this time onwards the symptoms gradually developed until 12.30 P.M., when I arrived.

The bromoform must have accumulated at the bottom of the bottle through its not having been properly shaken up