RETENTION OF THE MENSES, CAUSED BY IMPERFORATE HYMEN. REPORT OF TWO CASES WITH SOME REMARKS. By LOUIS W. ATLEE, of Philadelphia.

MARY P., sixteen years of age, tall and thin, but with no appearance of ill-health, was brought by her mother to my father's office May 17, 1881. She resided in a healthy place near the city, and worked in a woollen mill, which she said was well ventilated and not dusty.

She urgently demanded relief from unbearable pains in the lower part of the belly, attended by frequent inclination to pass water, which at times was very difficult to accomplish, and an almost constant desire to empty the lower bowel, in fact she had to be shown the privy almost as soon as she entered the office. This condition of things had begun some months before; it was getting worse, and every few weeks for a period of four or five days it was aggravated very much. When asked, her mother said her daughter had never had any show of monthly sickness, or sign of bloody discharge.

This case of amenorrhœa was attended by symptoms so special as to call for a direct examination of the genital organs in order to find out if some

malformation did not exist that prevented the menstrual excretion. There was regular periodical monthly return of expulsive pain in a girl about the age of puberty, and with other symptoms of that period of life.

When attempt was made to pass the finger between the labia it was found to be impossible. It felt as if a very tense cyst with a thick wall blocked up the vaginal canal. The finger passed into the rectum, the gut was found to be pressed back very firmly by an elastic mass, that felt like a thick bladder filled to its utmost limits by a dense fluid. Ocular examination showed that no vaginal orifice existed; and a smooth red membrane existed there, that shut it up. This projected forwards, so that it might be likened to a knuckle between two fingers. A catheter was introduced into the meatus urinarius, which was seen just over the upper part of this red projection; a small teaspoonful of urine came away.

An exploring needle (Charrière's) was now thrust into this bulging mass, but nothing came. A trocar, one used habitually for hydrocele, was then introduced, and slowly a thick dark red liquid began to ooze from the end of the canula. After about four ounces had come slowly away, the instrument was removed, a large diaper was applied by the mother, and the patient left to walk some two squares to return home in the cars. She returned at the end of a week to report herself as perfectly well.

I have written to my grandfather, Dr. John L. Atlee, of Lancaster, asking him if, in his experience of sixty years, he has met with any such case as this one. I extract from his answer as follows:—

"Some years ago, a young girl, about 15 years of age, was brought to me, who never passed her menses, and suffered at each period. Upon examination I found, as you described, the pelvis full and the membrane tense. I made a small opening first to confirm the diagnosis; a fluid like molasses was discharged. I then made a crucial incision, laying open the ostium vaginæ freely, and nearly a quart of a similar fluid was discharged. After cleansing the parts I sent her home; and suppose it was all right, as I never saw her afterwards.

"Another very interesting case of imperforate hymen[1] occurred to me many years ago in the early part of my practice. I was sent for to a primipara, whose husband kept the gate at Witmer's Bridge. When I arrived in the evening she had been in pain all day. Examination *per vaginam* revealed a very strong membrane, occluding the vagina, of quite a fleshy character. I traced it all around and could find no entrance for the point of my finger. In the absence of pain, I could feel a tumour an inch higher up, that felt like the mouth of the uterus stretched over the head of the child. I tried to break the fleshy membrane, but it was impossible. I came home, got my instruments, and made a crucial incision through the membrane, assisted by an old lady who held the candle. As soon as I had done this, I felt the os tincæ and the membranes and head presenting, I ruptured them, and in a reasonable time delivered the patient. She had many children afterwards. The question arose, how could impregnation take place, according to the acknowledged law of impregnation? I could not pass even a probe through any opening into the vagina in this case after searching closely just behind the orifice of the urethra."

[1] This case, of course, is not reported as one of retention of the menses from imperforate hymen, but it is certainly worthy of record, and I cannot refrain from including it here.

These two cases appear to be worthy of record, and of being commented upon, from the fact that quite extensive research has shown that with the exception of Barnes's *Med. and Surg. Diseases of Women* (London, 1873), and of Emmet's *Gynæcology*, all our systematic treatises in the English language on Surgery and on the Diseases of Women, either altogether ignore this affection, or else very imperfectly appreciate and describe it. Again, as Morgagni puts it, *non numerandæ sed perpendendæ sunt observationes.* It is evident, moreover, that such cases as these are very rarely met with, for my father's experience is one of over thirty years, and that of my grandfather of over sixty, so that both together they represent the experience of a century of active practice. Nélaton (*Pathologie Chirurgicale*) speaks as if he had never encountered this state of things but once.

The anatomical changes brought about in the parts, in these cases of retention of the menses from imperforate hymen, are these. The blood coming down from the uterus is completely arrested in the vagina, which becomes distended, forming an enormous tumour on top of which the uterus is pushed upwards and a little to the right of the median line. The uterus, on account of the great resistance that it offers, does not become distended until very late; when this occurs the blood will be forced into the Fallopian tubes, distending them also.

In these cases, if let alone and the hymen does not give way, the uterus or Fallopian tubes must yield from over-distension or from gangrene. Instant death has followed rupture of the uterus (Courty, *Maladies de l'Utérus*), and fatal peritonitis, rupture of the Fallopian tubes.

The symptoms that accompany the filling up of the parts are these: The patient first complains of colic in the hypogastric region, with a sensation of weight and uneasiness; this lasts for five or six days, and then is absent for a month, until the recurrence of the monthly sickness, when these symptoms return with greater intensity. After this has continued for some time (depending upon the amount of blood exuded), the pains acquire the character of the bearing down pains of parturition. With these symptoms we have the gradual formation of a tumour in the hypogastric region, with tingling and numbness of the extremities from pressure on the sacro-lumbar nerves; there is also difficulty of defecation, with a tiresome tenesmus in the rectum; the bladder is pressed on, and we have not only vesical tenesmus, but dysuria or even retention of the urine. Then follow the sympathetic disturbances of the digestive functions, loss of appetite, and vomiting. The calm which the patient enjoyed in the intervals of the menstrual sickness becomes shorter, and the health is profoundly altered, so that her life is now only a series of sufferings, intermingled with periodic exacerbations.

When a young girl with such a history of symptoms, and with all the outward appearance of the age of puberty, presents herself, a thorough

physical examination of all the genital parts is absolutely necessary. In the vagina, a reddish or violet-coloured projecting tumour will be found, and if the tumour is very tense, the labia minora are effaced. On digital examination of the rectum, its anterior and posterior walls will be found pressed together by a tumour in front. In some cases, those of long standing, in the hypogastric region will be found a tumour, giving a dull flat sound on percussion. Notwithstanding the comparative ease in these cases of making a correct diagnosis, various mistakes have been made; the tumour in the vagina has been thought to be a fallen womb, or the bag of waters, and the hypogastric swelling has been mistaken for pregnancy and ascites (Courty). The prognosis will be the more favourable the earlier the case is seen; when the Fallopian tubes are much distended and tumours can be felt in their position, the prognosis is so unfavourable that some authors have advised that the case be left alone, as death will surely follow (Dupuytren, Boyer, and Cazeaux).

The treatment immediately indicated is the removal of the obstacle to the flow of the blood. As to when and how this is to be performed with the greatest safety to the patient, Bernutz and Goupil (*Clinique Médicale sur les Maladies des Femmes*) advise waiting till eight or ten days after the menstrual period, when the parts will be in the most quiescent state, and then to puncture the hymen with a hydrocele trocar, with a piece of gut attached, for the purpose of avoiding a too sudden emptying of the uterine cavity. When the uterus is emptied too quickly, the Fallopian tubes are apt to contract simultaneously; for this reason a catheter should not be used to insure the escape of the blood. If the blood stops, more punctures can be made; when the greater part of the retained blood has come away, a free incision is made in the obtruding membrane, and means are used to dilate and insure the final permeability of the canal.

Emmet relieved the four cases he has met with by dividing the hymen with a bistoury, and the washing out the vagina and uterus with warm water. A small glass vaginal plug was then introduced and removed twice a day in order to wash out the vagina.

Barnes mentions that death has followed from small as well as from larger incisions of the hymen, and advises that an opening be made sufficiently large to allow of free evacuation, and to prevent the entry of air a compress should be applied over the uterus, and sustained by moderate pressure with a bandage; if any decomposition should arise, the gentle injection of a weak solution of the permanganate of potash or carbolic acid will be desirable.

Courty advises that the operation be performed at the same time as Bernutz and Goupil, eight to ten days after the menstrual period. The hymen is made to bulge out by pressure on the hypogastrium, it should then be seized with a pair of forceps, and a circular piece cut out with a bistoury, or a pair of curved scissors. The pressure on the hypogastrium

must then be stopped, and a thorough examination made of the genital organs with the index finger, and afterwards a medium-sized gum-elastic sound, large enough to fill up the opening, is put in. In this way the blood is kept from spurting fast, and the uterus and vagina from returning to their former condition. The air reaches the uterine cavity with difficulty, and influences it in the least unfavourable manner.

Nélaton (*Pathologie Chirurgicale*) recommends incising the membrane with a bistoury, trocar, or a lithotome, and the introduction of a canula or a tent, to prevent the closing of the opening thus made.