ACCIDENTAL SEPARATION OF THE SYMPHYSIS PUBIS DURING LABOR.

BY GEORGE McNAUGHTON, M.D.

Read before the Medical Society of the County of Kings, Dec. 17, 1889.

If we were to judge of the frequency of this accident by the amount of space given to its consideration in our text-books, we should conclude that it must be very rare. Some authors do not even mention its occurrence; Lusk devotes a few lines; also in the "American System of Obstetrics" may be found an article written by Dr. E. P. Davis. This subject is more fully considered by the German and French writers.

One contributor, Ahlfeld, believes that injuries to the bony pelvis are not infrequent, and that the physician should always look for them after a particularly hard or tedious labor.

This accident doubtless occurs more frequently than has been reported. Some physicians fail to publish their cases, either because of indifference on their part, or that they do not wish to make public the fact of such a lamentable accident.

At the time that I was in attendance upon the unfortunate woman who was the subject of this injury, I naturally turned to my books for guidance as to treatment, prognosis, etc., but found the information from that source very unsatisfactory. Moreover, my consultants were not full of suggestions: hence my desire to present the following history for your criticism:

In the latter part of November, 1888, Mrs. ———, a strong, healthy-looking woman, medium size, twenty-three years of age; menstruation regular, but somewhat painful, occurred the last time about August 1st. She informed me that the sexual act had never been completed, because of the excessive pain which was produced at the instant of contact. She was placed on my table for examination, and the attempt to make digital exploration was attended by excruciating pain. At the same time the patient would extend her legs, with her knees touching, rendering examination impossible. Thinking I might succeed by the use of cocaine, I tried to apply it to the vaginal orifice; but with no better success. I then asked the patient to make application of the same by means of absorbent cotton, which she did, and the result was the same, so far as my examination was concerned.

On the following day a friend administered ether, and I succeeded in making an examination. The hymen was found intact, and even under profound anæsthesia the muscles about the vaginal entrance continued to contract. The parts were stretched, care being taken to destroy as much of the hymen as possible. The uterus was found enlarged. That, with other signs, led us to believe that the patient was pregnant at least three months. She was advised to use a large bougie every day. This, with the use of cocaine locally, made, I understand, sexual intercourse possible.

The patient remained in good condition. Nothing unusual occurred to attract attention until the commencement of labor, May 7th, about 4 o'clock A. M. I was called to see her at this time, and, on attempting to make vaginal examination, found the same resistance as was offered on the occasion before mentioned. Therefore, of course, my examination was unsatisfactory. I satisfied myself, however, that she was in labor, and that I could be of no immediate use. I saw her at intervals of a few hours until the next day at noon. She was in

excellent condition, os dilated, pains regular and vigorous but ineffectual.

It has been and is my custom to postpone the use of forceps as long as possible, at least until I am satisfied that no further progress is likely without their aid; then I advocate their use, and insist on their application.

I asked a friend to consult and assist. He made an examination, and advised the immediate application of the forceps. The head presented L. O. A. I think it was scarcely engaged at the brim. I put on the forceps (Simpson's long double-curved); they were applied within the uterus, the handles pressed well back on the perinæum, and as great traction as I dared was made, without, so far as I could ascertain, moving the head a particle; this traction was repeated several times, with like result. I then asked my consultant to try; he being much less muscular than myself, I scarcely expected he would succeed. I made pressure over the fundus at the same time that he made traction. At second attempt he thought he had started the head; at his third we were both sure something had been started, for we were conscious of a distinct shock, and I believe both thought the forceps had slipped. On investigation, such was found not to be the case, but the head had come down a little. Traction was again made, and a second sensation (like the first) was experienced.

It would be impossible for me to say whether or not an audible crack occurred. I am inclined to think, however, such was not the case, but that we were made aware of something unusual through our sense of touch.

The child was quickly brought into the world, and its arrival was followed by a tremendous gush of blood, which did not seem to come from the usual source.

On examination, my finger passed through a slit in the anterior vaginal walls, to the right of the urethra (as afterward ascertained), up to the separated pubic arch. The points of bone were separated about one inch, and felt like bone denuded of its periosteum.

We at once realized the fix our patient was in, and the proper treatment next claimed our attention. We proceeded to search for the meatus urinarius, which was found only after considerable trouble; a catheter was introduced, and the urethra put in its normal position, held there, and the vaginal rent stitched together. No drainage-tube was introduced, but I am quite certain that if pus or fluid had been present there would have been sufficient space for its escape.

Antiseptic precautions were carried out. A tight bandage was placed around the hips, the knees and feet were tied together, and an opiate was administered for the relief of pain, which was excruciating

in the back and region of the symphysis pubis. Cathether was used for two days, after which the patient was able to pass her water naturally.

A general peritonitis developed, which continued to grow worse until her death on the ninth day after delivery.

Autopsy not allowed.

I neglected to state that the baby was born alive, and was not unusually large; it bore some traces of forceps pressure.

As to the cause of rupture of pelvic joints in labor: undoubtedly some women are predisposed to these injuries at this time. This predisposition may be congenital or acquired; in the latter case it is probably due to some inflammatory process affecting the bones or joints. It has been shown by experiments that an enormous force is required to separate the pelvic joints in cadavers of pregnant women; even then it is not always possible.

The most frequent immediate cause is of course too much force in expulsion or extraction. In my case I do not think too much power was used in extraction, for the simple reason that in the operation such power did not exist. The direction of traction might have been, and probably was, changed slightly by my consultant.

There has been one case of separation of symphysis pubis reported which was said to have been caused by the passage of an immoderately enlarged and hardened placenta in an osteo-malacic pelvis. Separation of pelvic joints is most apt to occur in pelves that are generally contracted. In many cases which have been reported—in fact, most of the cases—the diagnosis was not made at the time of the accident. The symptoms are, however, quite marked, even when the separation is slight.

Women complain of great pain in region of the sacro-iliac synchondrosis, one or the other or perhaps both; also at the pubic joint. Ahlfeld states that any two or all three of the pelvic joints may be separated at the same time; the most frequent two being the left sacro-iliac synchondrosis with the symphysis pubis, the next being the right with the symphysis, the most rare—both synchondroses.

If difficult mobility of the legs continue longer than one day after delivery, attention should be directed to the pelvic joints Dribbling of urine is also a suggestive symptom.

To examine the patient, place the thumbs over pubic symphysis, so that the tips lie over the supposed point of rupture; press alternately. By these manipulations we can discover whether motion is present, and if patient experiences increased pain; if so, proceed to make an internal examination. Sometimes the separation of the soft tissues will enable one to introduce his finger between the points of bones.

If a separation of the sacro-iliac synchondroses is present, pressure toward the centre, from each wing of the pelvis, will produce sharp pain in the affected joints. This may be repeated, and, if the same results are produced, a further examination is indicated; then place the patient on her side, in which position the condition can be positively made out. In case of separation of sacro-iliac synchondroses, internal examination is of little use. The degree of separation is variable.

The operation of symphysiotomy at one time attracted much attention, and has recently been revived.

Baudelocque found that when the separation at the symphysis amounts to one inch or more, the antero-posterior diameter is increased scarcely one fifth ($\frac{1}{5}$) of one inch; this has been verified by others.

In a certain proportion of cases of separation of symphysis a callus is formed between the points of bone, and a natural cure results. Far more frequently, however, an abscess forms, which usually ends fatally within three weeks.

The chief means of treatment is in the application of a pelvic girdle or bandage. The upper part of the binder should come below the spine and crest of the ilium, since otherwise the posterior synchondroses will be disturbed; if patient cannot stand the binder, she may be placed on her side. At the time that my case was under treatment we considered the propriety of suturing the points of bone, as is done after fracture of the patella.

Incomplete cures and fatal results occur even when the diagnosis is promptly made and the proper treatment applied. Patients, when they get better, have trouble in locomotion for a long time. Some women, who were incompletely cured, were easily delivered at subsequent confinements. Callus, in one case noted, proved an obstruction.

Prof. Ahlfeld, who has treated this subject more thoroughly than most writers ("*Schmidt's Jahrbuch,*" vol. clxix.), reports nine cases of pelvic injuries observed by himself, as follows:

Case I.—Complete separation of symphysis, with secondary separation of both synchondroses, after forced forceps-extraction: Death.

Case II.—Inflammation of left sacro-iliac synchondrosis during pregnancy; severe pain during delivery: Cure.

Case III.—Easy birth; normal pelvis; inflammation of pubic symphysis: Cure.

Case IV.—Extraction of a large child in 3d head position; separation of symphysis: Cure.

Case V.—Birth in knee-cowering position; lacerated pubic symphysis; peritonitis: Death.

CASE VI.—Mature child in 3d head-presentation; moderately, generally contracted pelvis; rupture of right sacro-iliac synchondrosis: Death.

CASE VII.—Perforation and cephlotripsy in a generally contracted pelvis; endocarditis: Death.

CASE VIII.—Easy forceps-extraction; cross presentation of head; painfulness in both synchondroses: Cure.

CASE IX.—Long retention of head in pelvic entrance; occiput posterior; forceps, moderately difficult; injury to right synchondrosis: Cure.

He appends a full literature, to date, of injuries to the pelvic bones and joints.

This author, you will notice, reports nine cases of all kinds of injuries to the pelvic bones and joints, four resulting in death. A study of the cases shows that some were probably slight injuries—in fact, one was an inflammation of the joint during pregnancy, and no separation at time of delivery. However, by this article we must be convinced that injuries to the pelvic joints are always grave and deserve careful attention.

The latest writer on this subject is Dr. A. Dührssen (Berlin, 1889, "*Arch. f. Gyn.*," vol. xxxv., part i.), "On Rupture and Suppuration of Pelvic Joints during Birth and the Lying-in Period." His conclusions, which were based on one case observed by himself and thirty-two reported by others, were as follows:

"The dictum of text-books, that the prognosis in symphysis suppuration is unfavorable, is in this sense not correct. We must not, as heretofore, include cases with general pyæmia or septicæmia, since in these the prognosis does not depend on symphysis suppuration.

"Excluding these cases, the prognosis depends wholly on kind of treatment. It is only unfavorable when not incised. Cure without incision only results when an open rupture with free discharge of pus is present. After such discharge cure usually results by bony callus.

"The causes of symphysis suppuration are (pyæmic) metastatic inflammation of the joints; infection (non-septic nature) through vaginal wound, which, under certain circumstances, does not develop until the lying-in period; and tuberculosis.

"A continuous fever with painfulness and tumor at symphysis indicates a suppuration at this point. Suppuration of a non-ruptured symphysis may be easily overlooked.

"Incision should be done early, to avoid burrowing-abscesses.

"The manual delivery of the after-coming shoulder cannot produce rupture unless a previous disease of this joint was present.

"Of seventeen cases of suppuration of symphysis pubis, treated without incision, all were fatal. Seven cases of suppuration of this joint, with primary incision into the joint or subsequent spontaneous discharge of pus, all recovered."

Dr. Dührssen's method of treatment is of course correct, if suppuration of the joint occurs; incision would be imperative: but it seems hardly fair to exclude a consideration of the worst cases—that is, those accompanied by an early peritonitis—in making a basis for prognosis.

In Aschenbach's thesis (Berlin, 1888) the single case of Dührssen is given in detail.

So far I have been unable to find an original case reported from America.