Cæsarean Section in a Case of Dystocia due to Coils of the Cord, 28 inches long, around the living full-term Male Fœtus, 8 lbs. 2 ozs. in weight.

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A short umbilical cord—whether absolutely short or relatively short by its own coils around the fœtus—may become taut enough during labour to arrest the descent and prevent the engagement of the head in the pelvic brim.

On the part of the cord, such an extreme and unyielding interference, at an early stage, with the mechanism of labour is a very rare occurrence.

In the following recent example of a relatively short cord, the treatment of the dystocia by Cæsarean section exposed the extent and security of the coiling of the cord, and the degree of its tension, in a manner otherwise clinically unattainable.

There were three complete, collar-like and appreciably tight, coils round the neck: from the navel to the neck the cord passed under the right shoulder and across the back of the chest and over the left shoulder: the remaining portion of the cord from the neck to the placenta was very short.

The photograph of the original placenta and the coils of its 28-inch cord around a substitute, a smaller fœtus, 7 lbs. in weight, reproduces their relations and illustrates the check exerted upon the original, a larger, fœtus, 8 lbs. 2 ozs. in weight, within the uterus, after the premature spontaneous rupture of the membranes at the 26th hour and the subsequent 26 hours' drain of the liquor amnii.

Other effects of the stable cord coiling, of the persistent placental adherency and of the excessive uterine retraction were experienced: (1) prior to the Cæsarean section the fœtal back became impalpable through the layer of flatulently distended intestines which filled in the space between the abdominal wall and the retracted uterus below the umbilical level; (2) at this site during the Cæsarean section the unopened and deeply-placed uterus proved too rigid and inflexible for peritoneal approximation: the intervening intestines, partly covered by omentum, had to be pushed aside by gauze packs whilst the uterine incision was made in the centre of a furrow $1\frac{1}{4}$ inches deep.

The placenta was implanted on the anterior and right wall of the uterus: a large area of the placenta and its short portion of intact cord were withdrawn from the uterus during the extraction of the child by the breech.

The pallor of the child was at first alarming; the coils of the cord were quickly loosened; the child breathed, and is now thriving.

In all other respects the steps of the Cæsarean section were of the usual character.

Enquiries arise as to (1) the diagnosis, (2) the symptoms and the physical signs of the first stage, and (3) the clinical evidence on which the choice of treatment was founded.

(1) There will be no attempt to declare the steps of a difficult, if not an impossible, diagnosis of the exact nature of the obstruction.

(2) The symptoms and the physical signs were recorded, and the management of the first stage of labour, long delayed and lasting 53 hours, was conducted by the Obstetric Assistant (Dr. Levin), the two Clinical Clerks, the Matron and the Ward Sister of the Liverpool Maternity Hospital.

(3) My own disinclination to interfere between my first visit at the 43rd and my third visit at the completion of the 52nd hour rested on the patient's previous obstetrical history; the favourable general condition; the two obstetrical factors—the passages and the fœtus—consistent with the birth of the living child when the cervix was fully dilated and the head engaged.

A possible forceps operation was contemplated up to the 52nd hour, *i.e.*, until the patient had been anæsthetised and the fœtal head palpated by the hand introduced per vaginam.

Then the sagittal suture lay nearer the pubes (Litzmann's obliquity—an expression of the direction of the taut cord); the disengaged head receded readily above the brim as if its ascent were easier than its descent; the manipulation of the head elicited the sensation of its being held from above; the head persisted in lying transversely, awkwardly placed, high up and inaccessible.

A forceps operation was objectionable.

There had not been any uterine hæmorrhage from separation of the placenta nor any local tenderness of the uterus.

The fœtal heart was beating normally.

The obstruction within the uterus was beyond any safe method of attack from below; gentle internal handling was limited to the fœtal cranium above the ears.

The expulsive labour pains had been repeatedly relieved by sedatives.

Patience in awaiting the natural efforts had been adequate, if not excessive.

Radical relief was due, or overdue; preparations were made and the Cæsarean section was commenced at the 53rd hour of the labour.

History of the Labour.

J.S., aged 22: a carter's sturdy wife. At the full term of her third pregnancy, dating from April 21 1911, was admitted into the Liverpool Maternity Hospital, in labour, at 10-30 a.m. on January 28 1912. She was then examined by the Ward Sister. The fœtal head lay transversely above the brim with the occiput to the right; one finger's dilatation of the cervix had been attained in the 10½ hours since the onset of the labour pains; the pains were slight. She spent the first day in Hospital with little complaint.

On the following day, January 29, the membranes ruptured prematurely and spontaneously at 2 a.m. (26th hour). At mid-day Dr. Levin, the Obstetric Assistant, reported a half-dilated cervix. At 5-30 p.m. an injection of scopolamine and morphia subdued the almost violent expulsive pains. At 7 p.m. Dr. Briggs first examined her. At 9 p.m. a ¼-grain of morphia was injected. At 11 p.m. the cervix was still incompletely dilated and the head was still above the brim.

On January 30, at 4 a.m., there was incomplete dilatation of the cervix. A general anæsthetic was given for the physical examination, the result of which has already been included in this report.

On February 15, in good health, she left for her home with the growing infant she had nursed throughout her stay in Hospital.

Previous Obstetrical History.

Two previous labours, both at the full term and both normal; the first at the patient's own home; the second in hospital, lasted only 12 hours, April 6 1910, the child weighed 7 lbs. 11 ozs.

Remarks.

A solitary clinical report of a Cæsarean section and its revelations in a case of coiled cord, of a rare and extreme stability, suggests further enquiry into the methods of diagnosis on which accurate authority has yet to be stamped.

Are inferences such as could be drawn from the case now reported sufficiently reliable, or in what direction is greater precision possibly obtainable?

Normal fœtal heart sounds throughout the 53 hours of labour were not inconsistent with a stable coiling of the cord.

Delivery by version or forceps would have been difficult, if not impracticable, with safety to the mother.

The life of the child rested upon the Cæsarean section.