

CERVICAL DYSTOCIA

by

SHIRIN MEHTAJI* M.D.

Cervical dystocia is a condition where the external os fails to dilate in spite of the normal behaviour of the uterine contractions and where all other causes of dystocia are excluded. There is a diversity of opinion as regards the definition of cervical dystocia; some authors include under this heading cases of inco-ordinate uterine action or failure of the internal os or obstetric sphincter to relax. According to Jeffcoate, three constant factors, — presenting part deeply engaged, normal pelvis and strong regular contractions, should be present in the diagnosis of primary cervical dystocia. The thinned out cervix with a rigid external os fails to dilate and a cartilaginous ring is felt at the external os. The labour is prolonged, secondary uterine inertia sets in and the patient becomes exhausted. Macrae called this type of dystocia "achalasia of the cervix" and Lewis called it "rigid cervix".

Dystocia is also due to certain organic diseases at the site of the cervix and this is known as secondary cervical dystocia.

Material

In this paper 53 cases of cervical

**Honorary Obstetrician and Gynaecologist, Cama and Albless Hospitals, Bombay.*

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dystocia are analysed which were seen among 28,690 deliveries at the Cama and Albless Hospitals in six years, 1963-1968, giving an incidence of 0.18 per cent. Sackett mentions an incidence of 1.04 per cent (86 cases of cervical dystocia in 8,213 deliveries). Arthur quotes an incidence of 1.5 per cent (26 cases in 1,784 deliveries in eleven months), and McCall and Hara report an incidence of 2.6 per cent.

Out of the 53 cases presented, in 31 cases the dystocia was of the idiopathic type, and in the remaining 22 cases, where organic causes were encountered in the cervix, it was of the secondary type. Congenital absence of portio vaginalis of cervix is a permanent organic cause of cervical dystocia; as seen in the table below, one was a primigravida and three were multiparous patients who also had cervical dystocia during their previous deliveries for the same reason. The previous operations were Fothergill's operation in 4 cases, and in the other two the operation was cervicopexy and tightening of internal os. Prolapse of the 3rd degree was the cause of the dystocia in 7 cases, 4 of these being primigravidae. The high incidence of prolapse in patients in our country is due to congenital weakness of the pelvic floor, and elongation of the cervix may be considered as an aetiological factor

TABLE I

Shows the causes of cervical dystocia in cases of secondary dystocia

Causes	Primipara	Causes	Multipara
1. Pinpoint—os	1	1. Cervical atresia	2
2. Congenital absence of portio vaginalis of cervix	1	2. Congenital absence of portio vaginalis of cervix	3
3. Prolapse 3rd degree	4	3. Prolapse 3rd degree	3
		4. Previous operations	6
		5. Carcinoma of cervix	1
		6. Saculation of posterior wall of uterus and cervix	1
Total	6	Total	16

besides other factors in the aetiology of prolapse.

Age and parity

Out of 53 cases, 22 were primigravidae and 31 were multiparae. Of the 22 primigravidae, three patients were below the age of 20, the youngest was 18 years old and the oldest was 36 year old. The idiopathic variety of dystocia was present in 16 primiparae and 15 multiparae. This is of no statistical significance as such, but the incidence of multigravidae delivering in Cama and Albless Hospitals is two and half times the incidence of primigravidae during this period. This denotes a definitely higher incidence of the idiopathic type of cervical dystocia in primigravida. Secondary cervical dystocia is naturally more common in multiparae, as shown in Table I.

Presentations

The presentation was occipito-anterior in 42 cases, occipito-posterior in 7 cases and occipito-transverse in 4 cases. Burnhill, however, mentions a higher incidence of occipito-posterior and occipito-transverse pre-

sentations along with cervical dystocia.

Diagnosis

In the idiopathic variety of cervical dystocia the labour begins normally, and if in spite of the presenting part being well engaged and good uterine contractions, the cervix fails to dilate, a diagnosis of cervical dystocia may be entertained. Because of the cervical resistance, the contractions become irregular and colicky and the patient complains of intense back-ache. On vaginal examination, the bony pelvis is adequate and a thinned out cervix well applied to the deeply engaged presenting part is felt. The external os is dilated only 2 to 4 cms and a repeat examination after 2 to 4 hours of irregular pains reveals no change in the dilatation of the external os. The labour gets prolonged and signs of maternal and foetal distress appear indicating the need for hastening and terminating the labour. In some cases a tight cartilagenous ring is felt. In other cases the external os is pin-point, the dimple of the external os may or may not be identified, the cervix is extremely thinned

out and sutures and fontanelles of the foetal head may be distinctly felt through the cervical wall. The external os sometimes gets displaced upwards and behind the presenting part to form what is called a "Sacral os." Occasionally, the displacement occurs forwards and this condition is known as sacculaton of the cervix. The anterior lip stretches more easily than the posterior, gets thinned out and is mistaken for the bag of membranes.

Out of 31 cases of the idiopathic variety of cervical dystocia, thirteen were admitted with leaking, in eleven patients the membranes ruptured when the cervix was two fingers dilated, in five cases the membranes ruptured when the cervix was three fingers dilated and in two cases artificial rupture of the membranes was performed for hydramnios and toxæmia respectively.

In cases of secondary cervical dystocia, organic rigidity of the cervix may be suspected when the patient gives a history of previous vaginal operations, cervical tears and lacerations following difficult labours, either normal or instrumental. On inspecting the cervix, pathological conditions like cervical polyp or malignancy may be diagnosed.

Differential diagnosis

Cervical dystocia has to be differentiated from cases of spurious labour, prolonged labour due to a hypertonic lower segment as a result of inefficient uterine action in a nervous hypersensitive patient, and faulty conduct of labour where the patient is allowed to bear down before full dilatation of the cervix. All other

causes of dystocia, such as contracted pelvis, cephalo-pelvic disproportion, malpresentation or abnormalities of the foetal skull should be carefully ruled out.

Prognosis

Arthur divides cases of idiopathic dystocia according to the type of cervix, such as thick, tense and hanging cervix. In the first group the cervix is thick, pains are weak, foetal distress and intrapartum infection occur and, due to failure of further dilatation, caesarean section is the treatment of choice. In the second group the cervix is thin and tense and pains are very strong; the dilatation may progress if oedema does not supervene. In the third group of hanging cervix, the diagnosis between a loosely applied cervix to the foetal skull in cases of cervical dystocia and lack of application of cervix to the foetal skull in cases of cephalo-pelvic disproportion is difficult, but with experience the two can be distinguished from each other.

In 31 cases of the idiopathic variety the cervical dilatation was one fourth in seventeen cases, more than one fourth and less than half in eight cases, half dilatation in two cases, three-fourth dilatation in three cases and a rim was felt in one case. In 22 cases of organic rigidity, the dilatation of the cervix varied from total absence of dilatation in seven cases to one to 3 fingers in the other fifteen cases.

Treatment

As cervical dystocia, specially of the idiopathic type, is diagnosed during the first stage of labour, the

patient should be well sedated, and acidosis should be prevented by giving glucose infusion, thus maintaining the proper electrolyte balance. In these 31 cases of the idiopathic variety, pethidine was given repeatedly in doses of 50-100 mg. in 16 cases. Intravenous pitocin therapy may be used to improve uterine contractions in those cases with weak pains. Out of 31 cases of the idiopathic type pitocin therapy was used in 15 patients, but it failed to dilate the cervix and other lines of therapy were required. Efosiñ, a drug which brings about dilatation of the smooth muscles of the cervix, was used in only four cases without any beneficial effect.

TABLE II
Shows the mode of delivery

Nature of delivery	Cervical dystocia of idiopathic type	Cervical dystocia of organic type
Lower segment C.S.	26	17
Classical C.S.	1	1
Cervicotomy and normal delivery or forceps	1	4
Malmstrom's vacuum extractor	3	—
Total	31	22

The indications for lower segment caesarean section in 26 cases of idiopathic type were as follows: maternal distress in six cases, foetal distress in ten cases, occipito-posterior position in four cases, large foetus in two and elderly primipara in one. In two cases the pains were weak and there was no progress in spite of pitocin therapy, the cervix becoming thick

and oedematous, and one patient developed signs of threatened rupture. Though cervical dystocia is a non-recurrent indication, in two cases the indication for previous section was cervical dystocia and this time also foetal distress developed.

An additional indication for classical caesarean in one case was concealed accidental haemorrhage, and sterilisation was done at the same time. The second patient was a case of carcinoma cervix and classical section had to be performed. Cervicotomy has a very limited place as a method of treatment and may only be undertaken when the cervix is thinned out and the greater diameter of the head has passed the cervico-vaginal junction. Out of five cases where cervicotomy was done, four were cases of prolapsed cervix and one was of the idiopathic type.

In the idiopathic group Malmstrom's vacuum extractor was used successfully in 3 cases where the cervix was three-fourths dilated. No laceration of the cervix was noted after delivery (Table II).

Regional anaesthesia, like caudal, is sometimes used, as blocking of the nerves helps to relieve the spasm. Paracervical block is also reported to be useful and effective in the idiopathic type of dystocia and was tried in two cases in this series, but without any beneficial effect.

Complications

If not recognised and treated in time spontaneous rupture of the uterus, traumatic post-partum haemorrhage and annular detachment of the cervix may occur in cases of cervical dystocia. No such complications

were encountered in the patients in this series. In one case signs of threatened rupture had developed.

Maternal and Perinatal Mortality

There was one death due to sudden cardiac arrest in a patient who was undergoing a caesarean section.

There were two stillbirths, one in the above mentioned case and the second in the case of carcinoma cervix.

Aetiology and Pathology

Secondary or organic dystocia may be due to fibrosis following previous operations, cauterisation of cervix, radium burns and benign or malignant neoplasms of the cervix.

In the idiopathic type of dystocia various points of views are postulated without any uniform conclusions.

Cervical spasm (Bourne and Bell), abnormal amount of fibrous tissue and disorder of function (Kreiss) were considered responsible factors preventing normal dilatation of cervix. Danforth and Buckingham (1964) reported changes in the fibrillar elements of the cervix, like collagen and ground substance, during labour.

Conclusions

1. Fifty-three cases of cervical dystocia were analysed; in 31 cases the nature of the dystocia was of the idiopathic type and in 22 cases organic or secondary causes were noted.

2. The diagnosis of cervical dystocia should only be made when dystocia due to other factors is carefully ruled out.

3. The diagnosis should be made in

good time to avoid major maternal and foetal complications; none were encountered in the cases reported.

4. An expectant line of treatment should always be attempted and adequate time be allowed for natural dilatation of the cervix. Operative interference is indicated only in the presence of maternal or foetal distress.

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