NEGLECTED STITCHES OF SHIRODKAR'S OPERATION FOR CERVICAL INCOMPETENCE

(Three Case Reports)

by

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Introduction

Cervical incompetence has been attributed to be the cause of many unsuccessful pregnancies terminating in the mid-trimester. The aetiology of the weakness at the internal os of the cervix is disputed and a true primary congenital anatomical defect is not always seen. There is usually a past history of a traumatic delivery or traumatic dilatation of the cervix. Shirodkar believes that the inability of the cervix to hold the products of conception is physiological, demonstrated during pregnancy. The mechanical inability of the cervix is aggravated by the second factor gravity having its effect upon the cervix in the upright position of the patient. The miscarriages are thus typically preceded by premature rupture of membranes through balooned or partly taken up cervix and partially opened internal os in the mid-trimester.

Shirodkar's technique and its slight modifications have been tried widely with very good result by many. Various different suturing materials have been used for cerclage, evolving different results, varying from Silk, Merselene, braided wires in polythene tubes, Dacron tape, Nylon and Autogenous grafts. Successful foetal salvage rate after isthmeo-cervical insufficiency repairs by Shirodkar's stitches have been reported by Barter (1964) 76%, Okla *et al* (1967) 85.2%, Döring (1965) 77%, Weingold *et al* (1968 74.6% Shirdokar (1967) 81%, Stromme *et al* (1966) 74%, Raphacal (1966) 79% over all. Foster (1967) reported 300 successful pregnancies after 180 cases of cervical cerclage by Shirodkar's technique. Doring also reported a collected series of 1345 cases with an overall success rate of 71.5%. The mode of delivery was both vaginal and by caesarean section. In cases of delivery by elective caesarean section some believe in leaving behind cerclage stitch for subsequent conceptions.

Three cases are presented where the Shirodkar's stitches were forgotten and missed by the patients, due to ignorance, admitted and treated at the Eden Hospital, Calcutta.

Case 1

Mrs. Y., Roman Catholic, 28 years was admitted through emergency with the history of pain in abdomen and bleeding per vaginam since morning of 12th June, 1969. She was an unbooked case with no antenatal care.

Personal History: House wife, married for 9 years, educated.

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Obstetric History: Para 3 + 3, last childbirth 1 year 9 months. First, term forceps delivery 1961, followed by normal vaginal delivery at term in 1963. She had three consecutive miscarriages between 14 to 20 weeks of pregnancy. During her last pregnancy the patient had a Shirodkar's operation in another institution and was delivered by elective caesarean section. Patient was not sure if the stitches were removed during delivery and had lost her old hospital record.

On examination: General condition fair, pulse/respiration 88/20 p.m. regular, B.P. 116/70 mm. of Hg., Hb, 12 gm%.

Obstetric examination: Uterus size approximately of 24-26 weeks' of pregnancy, (patient had conceived during lactational amenorrhoea). Foetal parts palpable with breech presenting. F.H.S. 144 p.m. regular. Uterus was irritable and was contracting.

Vaginal examination: The cervix was partly taken up, os was patulous admitting the tip of the index finger, slight active bleeding. Management was planned as threatened miscarriage. Patient was put to complete bed rest with sedatives, antispasmodics and Duvadilan by parenteral route.

Patient continued to have pain and slight bleeding. Pain aggravated and the uterine contractions gradually became stronger. Subsequent vaginal examination showed completely taken up cervix, but the os was still only patulous. Later, patient had smart vaginal bleeding and the footlings was extruded out of the vagina. On examination it was detected that the cervix was pushed on to the right and through a big tear extending up to the vault of the vagina on the left side the breech was being delivered. At the lowest pole of the tear the stitch material could now be palpated burried in the cervical substance. The delivery was spontaneous and the placenta with membranes followed. The baby weighed only 2 lbs. and was too premature to survive.

Immediate resuscitation was started and blood transfusion was arranged for. Under general anaesthesia with gas and oxygen. the rent was repaired vaginally and the Nylon thread used during the previous cerclage was cut and removed. The puerperium was uneventful and the patient was discharged well on the 10th day.

Case 2

Mrs. M. D., 21 years, Bengali Hindu, was admitted through emergency at 9 p.m. on 4-4-70 with a history of labour pains since 7 p.m. The same evening and membranes ruptured spontaneously. Patient paid no antenatal visit during this pregnancy.

Personal History: House wife, uneducated.

Obstetric History: Para 1 + 2, last child 2 years 6 months. Patient had two consecutive spontaneous miscarriages at 16 weeks and 18 weeks respectively. She had a Shirodkar's type of cervical cerclage during her last pregnancy at 16 weeks in Eden Hospital. Patient was discharged well and had a home confinement. Being scared of surgery she did not report for follow-up after Shirodkar operation and had no further antenatal care. She had a home confinment after being in prolonged labour, male baby living and well.

General condition moderate, pulse/resperation 80/18 p.m. regular, B.P. 120/80 mm of Hg., anaemic, Hb. 9.5 gm%.

Systemic examination: Heart and lungs nothing abnormal detected, liver and spleen not palpable.

Obstetric examination: Height of fundus corresponds to the duration of pregnancy, head presenting, both poles palpable per abdomen, L.O.T.,—F.H.S. 140 p.m. regular.

Vaginal examination: The torn cervix was pushed to the right. The external os was patulous through which the index finger could be passed communicating behind with the false passage, which was 6 cm. open, and completely taken up. The presenting part could be felt through the dilated false passage. The membranes were absent. At the site of the old tear of the cervix nylon thread could be felt with the knots intact, which were cut and removed.

Management: The labour progressed normally and the patient delivered spontaneously. The placenta and membranes followed; living female baby 6 lb. 2 oz. The puerperium was uneventful and the patient was discharged well with the baby on the 7th day. (Fig. 1) shows dilator in the original cervical cavity through the torn end and another dilator in the true cervical

canal. (Fig. 2) Patient has been recommended admission for amputation of the torn part of the cervix.

Case 3

Mrs. D. S., 24, Bengali, was admitted through emergency on 10-5-70 with a history of ambulance confinement on way to the hospital. Patient was bleeding badly per vaginam. She was a booked case. Patient had dribbling and pain for the last 24 hours, and strong labour pains for last 4 hours.

Personal History: Housewife, married for six years, low primary school education.

Obstetric History: Para 0 + 2, first terminated spontaneously at 26 weeks and second miscarriage at 24 weeks of pregnancy. Patient had Shirodkar's type of repair for cervical incompetence on 20-2-1970.

General condition moderate, pulse/respiration 110/22 p.m. regular, B.P. 100/70 mm of Hg., Hb. 12 gm%.

Vaginal examination: The Shirodkar's stitches were intact and cervix was pushed to the right. A tear almost 2" extended on the left side, from above the stitches. The Shirodkar's stitches of black silk were removed and the cervix was repaired vaginally with fine catgut stitches. The puerperium was uneventful. The baby was premature.

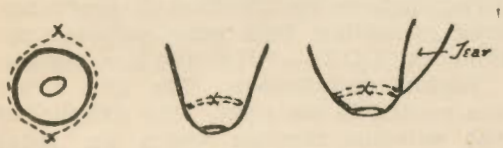

Fig 2

Cervix after Shirodkar's stitch

Discussion

Cervical injury and tears of varying degrees up to rupture of the uterus after Shirodkar's stitch, have been reported where the stitch could not be removed in time with the onset of labour or was ignored. Baumgarten (1965) reported 3 case of extensive parametrial laceration during labour following cerclage at the level of the isthmus. Two needed hysterectomy. Thurston (1965) reported one case where failure to remove stitches in time did lead to uterine tear extending from above the ligature. The uterine rent made the delivery complete and was repaired successfully vaginally. Weingold *et al* (1968) reported two cases of tearing through the suture. In all the cases reported in literature and the three cases presented the tear was at the cost of the lateral walls. The usual site of tying knots in Shirodkar's operation is on the anterior or posterior wall of the cervix, which remained intact. Thus the weakness is due to a possible deficiency or weakness of musculature at the lateral walls, caused either during traumatic dilatation of cervix, traumatic forceps delivery or congenital weakness.

Conclusion

Three cases are reported where ignorance regarding the consequences of Shirodkar's stitch on the part of the patient lead to laceration and injury of the uterus during labour. In two of the cases nylon thread was used, and black silk in the third. Patients should be explained the principles and aims of the stitches. The sequelae, should be explained to patients, particularly if they have delivery in other institutions than where operated upon; more so, when the cervical cerclage stitches are left behind after caesarean section with the prospect of further pregnancies. Removal of stitches close to term, before labour should be made a routine practice in our country.

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See Fig. 1 on Art Paper I