

## URETERO UTERINE FISTULA FOLLOWING LOWER SEGMENT CAESAREAN SECTION

by

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The patient P.M. aged 27 years, Hindu, para 2, had her first pregnancy 7 years previously and was delivered by Caesarean Section in a Mission Hospital due to Cephalo pelvic disproportion. Alive female child was delivered and she had moderate pyrexia in the postoperative period. No other details were available when she visited us in her second pregnancy at 32 weeks with Mild Pre-eclamptic toxæmia. Her expected date of delivery was 11-3-73. She was short statured, moderately well nourished was advised rest, sedatives, haematinics and was hospitalised for few days.

She was admitted again on 4-2-73 at 6 A.M. with history of good labour pains, for last 12 hours. Her B.P. was 120/78 mm Hg. and she had cephalic presentation with head still felt per abdomen. Her pelvis was adequate and cervix fully dilated and head was just about the level of spine at 8 A.M. Membrane were absent. As there was no progress forceps were applied by the Resident Surgeon and two tentative pulls were given but to no effect. Immediate caesarean section was performed by the Resident Surgeon. The bladder was easily dissected and the lower segment appeared stretched. A normal sized transverse incision was made and there was no difficulty in extraction of the head. Alive female child weighing 5 lbs 8 ozs was deliv-

ered and the uterus was closed in layers without difficulty. Her postoperative period was more or less normal except pyrexia ranging from 99°—101° F. Her stitches were removed and she was discharged on tenth postoperative day.

She came to out patient department after four weeks of operation with history of dribbling of urine on 21st day of operation. She was also able to pass urine when she felt like voiding.

On vaginal examination uterus was normal in size, anteverted, firm and mobile. Fornices, were free and fistula could not be visualised. Urine was draining through cervical canal. An uretero-uterine fistula was thought of. She was advised to come 8 weeks later for hospitalisation for investigation and treatment. She had an I.V.P. which showed poor concentration of dye over right kidney (Fig. 1) and the right ureter could not be traced.

She was hospitalised in 1st week of June and had a cystoscopy. Bladder showed normal mucosa; no other abnormality was detected. Three swab test was performed. Ureteric fistula was diagnosed. Patient had severe pain in the left loin, though right kidney was showing hydro-nephrotic changes and had some relief after Baralgin injection. Her blood urea was 42 mgm; urine culture was sterile. She was opened for uretero-vesical anastomosis. Left ureter and kidney were found to be normal, right ureter was found to have undergone hydro-ureteric changes. The right ureter was dissected from brin downwards. It was found to be constricted at the level of uterine arteries (Fig. 1) due to ligature during previous operation. Further dissection was abandoned. Proximal end was cut, distal end was ligated. The proximal end was implanted into the bladder with mucosa to mucosa anastomosis. Indwelling catheter was kept for ten days. Postoperative period

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was uneventful except pyrexia 102°F on 3rd. day. Urine culture showed *Klebsiella* sensitive to streptomycin. Catheter was removed on 18.6.73. There was no more dribbling and the patient was continent except slight dysuria which was treated with pyridium. The patient was discharged on 14th postoperative day. A follow up I.V.P. (Fig. 2) was done on 20th postoperative day, showing the right ureter up to the bladder.

#### Discussion

This is a rare surgical accident. Mahon *et al*, (1963) and Suhler and Saout (1971) have reviewed the literature. The reported cases in the literature are only 31. Lloyd Davies (1969) described a case of bilateral ureteric obstruction presenting as uraemia after a caesarean section. A number of predisposing factors have been suggested. Dextro rotation of uterus has been blamed as the left ureter is involved much more than the right. But in our case the right ureter was involved. Previous caesarean section has been attributed and it might be relevant if it was followed by scar dehiscence or infection causing fibrosis and ureteric displacement. Jequier and Piper (1973) reported a case of uretero-uterine fistula on the 14th day of second caesarean section. The operation was fairly easy and uncomplicated. The present case also had previous section and an uncomplicated, second section.

Difficulty in securing haemostasis in the angles of transverse lower segment incision might damage the ureter but in at least one case the incision was longitudinal (Mahon *et al*, 1963). A transverse incision might be extended by surgeon's hand during disimpaction of a deeply engaged head. Crichton (1965) advises vaginal disimpaction of the head in such circumstances. Mahon *et al*, (1963) also suggest that prolonged labour with disproportion might predispose to damage by causing oedema of ureters.

Ureteric injury at caesarean section may present with postoperative pain or pyrexia or might remain asymptomatic till the patient comes with symptoms. Fistula formation may be delayed for upto six weeks or may not occur. Spontaneous cure was reported by Mahon *et al*, (1963) in whom diagnosis was made by intravenous pyelography. Cystoscopy finding may remain normal if the injury is very low. A oedema of ureteric orifice may be seen.

The usual management of such an injury is exploration of damaged ureter with reimplantation in the bladder. Crichton (1965) and Ojo (1967) in a review of ureteric injuries mention reimplantation into that bladder which included two sustained at caesarean section. Jequier and Piper (1973) treated a case by defunctionary nephrostomy because it was important to relieve obstructive nephropathy and reimplantation of ureter into the bladder was considered contraindicated because of recent operation and possible infection. An intravenous pyelogram 4 months after nephrostomy appeared normal. The present case had developed fistula 3 weeks after the operation, there were no obstructive symptoms and because of the possibility of infection the operation was deferred for 8 weeks. Ureterovesical anastomosis was performed without difficulty with an uneventful postoperative period and subsequent intravenous pyelogram was perfectly normal. Some fistulas heal spontaneously as in a case reviewed by Mahon *et al*, (1950). Unilateral ligation of the ureter may not be followed by fistula formation and silent autonephrectomy may result. A spontaneous cure may also result.

#### Summary

A case of uretero-uterine fistula following lower segment caesarean section is

described. Its features and method of management are compared with previously reported cases.

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**References**

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*See Fig. on Art Paper VII*