

PERFORATIONS OF UTERUS BY INTRAUTERINE DEVICE*

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Intrauterine contraceptive device has been extensively used in this country as a national scheme for the past two years. Our experience in this part of the country is confined to Lippes' loop of 30 mm. size only, as advocated by the department of family planning, West Bengal. Various complications like menorrhagia, metrorrhagia, leucorrhoea and pain in abdomen can occur and most of them are amenable to treatment either with antibiotics, hormones or styptics. In some cases simple removal and reinsertion of the loop cure the complaints.

A more sinister though rare complication of perforation of the uterus by the Lippes' loop is gradually being recognised, particularly when the loop is extensively used as a national scheme.

Recently, Mazumdar has reported one case of perforation and she mentions of only five published case reports from world literature. This signifies the relative rarity of the condition. But we have come across four

cases of perforation in a relatively short period of six months.

Case 1

Mrs. S. K., age 28, para 6+0, had her last childbirth two years ago. She had a loop (Lippes) inserted six months after her last childbirth at a district hospital. There was no pain during the introduction of the loop and she had no complaints for about a year. Then she started having menorrhagia, the periods lasting for ten to twelve days. Various medicines including hormones were tried to control menorrhagia but with no effect. She had no pain. It was finally decided to remove the loop as she had become very anaemic. On examination, the loop thread was not detected. X-ray of the pelvis showed the shadow of the loop unusually high near the right sacro-iliac joint.

Examination under anaesthesia revealed the loop in the peritoneal cavity separate from the uterus. Dilatation and curettage was done as a treatment of menorrhagia. As the patient was very anaemic laparotomy was postponed. At a later date the laparotomy showed the loop in the peritoneal cavity with the thread attached to the posterior surface of the fundus near the right cornu. The thread with loop was removed by gentle traction. The uterine wound had completely healed and was represented by a dimple. There was slight oozing of blood on removal of the loop—a mattress suture was applied at the site of the uterine wound for haemostasis. As the patient had refused ligation nothing else was done. The uterus was normal in size and retroverted. The patient made an uneventful recovery and was discharged within a week.

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Case 2

Mrs. T. P., age 23, para 3 + 0, had her last childbirth two years ago. She had a loop inserted ten months after the last childbirth at Tamaluk subdivisional hospital. She had slight pain with a fainting attack just after the insertion of the loop but she was well within half an hour. She had no further symptoms for over a year. For the last four months she was having pain in the right iliac fossa which increased on walking, but there was no rise of temperature. She also had leucorrhoea for three months. She had lactational amenorrhoea until the last two months. On examination, at Tamaluk hospital the loop thread was not detected and x-ray of pelvis was advised. The loop was detected high up in the pelvis near the right sacro-iliac joint. She was transferred to the district hospital on the 7th January '67. On examination, there was tenderness in right iliac fossa over the MacBurney's point. Vaginal examination showed that the uterus was retroverted and normal in size. The right fornix was tender and the loop was palpable in it.

Laparotomy showed the loop in the peritoneal cavity hanging near the ovary with the thread attached to the right cornu just above the attachment of the right tube. The thread was adherent to the upper margin of right tube. The loop was separated from the fallopian tube and removed. The uterine wound near the right cornu had completely healed. A purse string suture was applied at right cornu for haemostasis. The patient refused ligation. Her appendix was long and retrocaecal; appendicectomy was done. Postoperative period was uneventful and the patient was discharged home after a week.

Case 3

Mrs. P. S., age 26 years, Hindu, para 3+0, was transferred from Jhargram Subdivisional Hospital on 2nd October '66.

Her last childbirth was one year ago. She had a loop inserted eight months ago (i.e. four months after her childbirth) at Jhargram Subdivisional hospital. Her periods were regular and she had no complaints for seven months after the insertion of the loop. She complained of pain in ab-

domen and reeling of the head for one month, not relieved by analgesics, tranquilisers and antibiotics. Removal of the loop was decided upon for her symptoms. On an attempt to remove the loop the thread broke and dilatation and curettage was performed. On exploration of uterus during curettage, no loop was felt. She was transferred, therefore, to District Hospital.

On pelvic examination the uterus was found to be retroverted and the loop was felt in the right fornix. X-ray of the pelvis showed the loop near the sacro-iliac joint. After improvement of her general condition and correction of anaemia for about a week, a laparotomy was performed on the 11th October '66.

At laparotomy, perforation of uterus was observed at the right cornu. Part of the loop was out through the perforation and entangled in the right broad ligament just below the fallopian tube. There was no blood, recent or old, in the peritoneal cavity. The loop was removed after careful separation of adhesions. The uterine perforation was closed by a purse-string suture. Post-operative recovery was uneventful and the patient was discharged on the eleventh day.

Case 4

Mrs. S. S., aged 24 years, Hindu, para 3+0, was admitted on 8th November '66.

Her last childbirth was two years ago. She had a loop inserted five months ago (i.e. 1½ years after her childbirth) at Jhargram Subdivisional Hospital. She had no complaints for four months after the introduction of the loop. Then she was admitted in the hospital with the complaint of pain in right side of abdomen for one month and bleeding per vaginam for fifteen days, which started from her expected date of the period. Her periods were regular lasting for four days except the last one which lasted for only one day.

On pelvic examination uterus was found to be of normal size, retroverted and no loop thread was detected. X-ray of the pelvis showed the loop near the right sacro-iliac joint. On the 9th November dilation and curattage was performed under general anaesthesia. Products of conception and

loop thread were found inside the uterine cavity. The loop thread broke on traction. On digital exploration of the uterine cavity no loop was felt. Laparotomy was performed under the same anaesthesia. Loop was found tugged in the omentum and loop thread was seen to be coming out of the uterus at the fundus just above the uterine end of the right fallopian tube. Loop with the omentum was removed (see photograph). No opening of the uterine wall was visible and no suture was necessary. Post-operative recovery was uneventful and the patient was discharged on the 9th day.

Discussion

Incidence of perforation of the uterus by intrauterine device is very variable. Tietze (1962) gives an incidence of I in 300 insertions for Birnberg bow, but only I in 2500 insertions for Lippes' loop. Hall on the other hand reports one perforation in 969 cases of Lippes' loop. Our four cases were collected from approximately 16000 total insertions—an incidence of I in 4000 insertions.

On analysing the reported case reports of Indru, Lehfeldt, Thambu, Macfarlan, Mukerjee, Clarke, Nanda, Mazumdar and our series of four cases, we find that almost all the cases except that of Nanda (36 years) were in the age group of 20 to 30 years. This is because it is in this age group that the loop is mostly inserted.

The highest parity with perforation was in eighth para (Nanda), while the lowest parity of the patient was one (Mazumdar). There were two second paras, four third paras, one sixth and one seventh para. Hence, though perforation was more common with women having more than three children, it also oc-

curred with women who had one child.

Time of application in about 50 per cent of the reported cases was within three months of childbirth.

In about 50 per cent of the reported cases, the uterus was retroverted. In all our four cases the uterus was retroverted.

It is interesting to note that in all our four cases the perforation was near the right cornu.

In two cases of our series the patients had no symptoms for over a year after the insertion of the loop. After that one had pain in the right iliac fossa simulating appendicular pain, while the other had menorrhagia with no pain. In Indru's case the patient also had no symptoms. In about 20 per cent of the recorded cases the patients complained of pain at the time of introduction.

On analysing our four cases we find that the perforations were spontaneous and not during the insertion of the loop. However, slight trauma at the time of the insertion may be the starting point of future perforation.

To diagnose perforation of the uterus by the loop, one ought to remember the possibility whenever the loop thread is not visible. Bimanual examination may show the loop in the fornix separate from the uterus. X-ray shows the loop in an abnormally high position and finally, exploration of the uterine cavity by the curette confirms the diagnosis.

As to treatment we strongly feel that whenever the diagnosis is made, laparotomy should be performed. We find it difficult to agree with Indru or Lehfeldt in their views of leaving

the loop in the peritoneal cavity with careful follow up. In one of our cases there were adhesions of the loop with omentum and we feel these may cause intestinal obstruction at any time in the future.

In fact, gangrene has been reported by Thambu. All our cases did very well after laparotomy and were discharged within ten days.

Conclusions

Perforation of uterus is a recognised though rare hazard of intrauterine device. It can occur spontaneously even when applied by trained doctors. In spite of this its advantages far outweigh its disadvantages and hence it should still be regarded as a standard procedure of contraception. The idea of utilising paramedical technical staff for introduction of the loop should be abandoned; instead doctors should be better trained in its use to reduce the risk. The authors also feel that a modification of the shape of the loop would minimise the risk.

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