

## PERFORATION OF UTERUS BY INTRA-UTERINE DEVICE

by

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To solve the problem of population explosion various methods are being employed. Intra-uterine device is one of them. The loop, being cheapest and most convenient, was accepted and popularised throughout the country. After extensive trial of the loop all over the world over a long period only a few complications have been reported. Perforation of the uterus is one of them. Many cases of perforation of the uterus by the loop have also been reported in India.

The incidence of perforation of uterus by the IUCD varies with the type of I.U.C.D. used. Hall (1966) studied the advantages and disadvantages of the various I.U.C.D.s in the United States and reported as follows: perforations by coil insertions—nil; one in 969 cases of loops; five in 1041 cases of bows (an incidence of 1 in 208 cases). Birnberg and Burnhill (1964) reported insertion of bows in 88 cases with no perforation. Rutherford in 1966 reported a case of perforation of uterus by a Grafenberg ring. Teitz states that, upto April 1965, in 23,602 I.U.C.D.S. 24 extra-uterine displacements had occurred; his incidence is 3.3 per

thousand with bows and 0.4 per thousand with other types of I.U.C.D. Ledger and Wilson in 1966 reported the incidence of perforation of the uterus by Lippes loop as 2.5 per thousand insertions. Lehfeldt *et al* (1965) give the incidence of perforation by Lippes loop as one in one hundred and fifty. Esposito (1966) reported one case of perforation of uterus by a Margulies coil. Many Indian authors have reported cases of perforation of uterus by Lippes loop. Phillips and Kaur (1967) reported 7 cases of perforation from Amritsar; Chaturvedi and Gulati (1967) reported two cases from Bhopal; Nanda (1966) has reported one case from Assam; Muzumdar published one case in 1966; Gadgil and Anjanayulu (1967) have reported one case from Poona; Chakravarti and Mandal reported 4 cases from Midnapur, West Bengal; Basu Mallik has reported one case from Banaras Hindu University. I am reporting one case so that it can be on record:

### Case Report

Mrs. XYZ, Hindu, 28 years, was admitted in our clinic on 17-7-1968 with the complaint of pain in the left iliac fossa of short duration. Present history: She had four full term normal deliveries, but as all were daughters and she wanted a son later, she got a Lippes loop fitted in January 1967 during the period of lactational amenorrhoea. Without the onset of menstruation she conceived with the loop in. She deli-

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Received for publication on 25-2-1969.

vered prematurely on 20th February, 1968. As the loop was not expelled during the third stage of labour she was x-rayed 15 days after the delivery, and the loop was visualised. From March, 1968, she had normal regular periods without any dysmenorrhoea. Her last date of menstruation was 29th June, 1968.

On examination the general condition was very satisfactory. Pulse 74 p.m.; volume and tension were good. Abdominal examination showed no guarding of muscles or tenderness. On vaginal examination the uterus was normal in size and anteverted; the loop was not felt through any of the fornices. Prior to admission here, she was screened; hence radiological examination was not repeated. It was decided to explore the uterus and remove the loop per vaginam and do vaginal sterilization. In case the loop was not in the uterus abdominal exploration with sterilization was to be done.

Under spinal anaesthesia the uterus was explored but the loop could not be felt; hence, a laparotomy was done. The loop was found lying in front of the broad ligament, on the left side, below the left tube, near its cornual end. Tubectomy was done and the abdomen closed. She had an uneventful recovery. She was discharged on 27-7-1968. In this case the uterus did not show any recent or old sign of perforation.

### Discussion

From the review of the literature it is obvious that many of us have come across this complication of the loop; but two problems are still facing us.

- (1) What is the mechanism of the perforation of the uterus by the loop?
- (2) If perforation of the uterus occurs, whether the loop should be removed or a conservative line of treatment should be adopted?

It is debatable how the loop reaches the peritoneal cavity. Whether the uterine wall is perforated during the insertion and the loop is placed directly into the peritoneal cavity, or whether the loop migrates through

the intact uterine wall are two possibilities to be thought of. In four out of five cases reported by Ledger and Wilson (1966), perforation had occurred at the time of insertion. Macfarlan (1966) also reported a case of perforation of the uterus at the time of insertion during the period of lactational amenorrhoea. The uterus is soft during this period; hence, he suggests that the loop should be inserted after regular menstruation is established or the operator is positive of the complete involution of the uterus.

The majority of cases with displaced loops are diagnosed during the follow-up studies, with or without symptoms. The loop and spiral are so pliable that they can easily conform to the changes in the shape and size of the uterine cavity. It is hence unlikely that they could themselves penetrate through the intact uterine wall.

Diagnosis of perforation by I.U.C.D. can be done by a hysterosalpingogram beolocator, or exploration of the uterine cavity, as plain x-ray is not conclusive. Beolocator is an instrument for localization of foreign bodies, which was designed and described by the Danish surgeon, Jorgenson, in 1964. This instrument is very useful for locating and removing an I.U.C.D. with or without a tail. It involves an intrauterine sound or a hook attached to a transducer probe which produces a contact noise when an object harder than normal tissue is touched. At our disposal here are only plain x-rays and hystero-graphy.

Opinion is still divided on whether the device should be removed or not, if it slips into the peritoneal cavity.



Lehfeldt *et al* in 1965 reported one case of perforation of uterus with Lippes loop. As it was asymptomatic no attempt was made to remove it and another was inserted. Birnberg and Burnhill (1964) were also of the opinion that no surgical intervention be done to remove the loop if no symptoms are produced. Indru (1966) also treated a similar case conservatively; while there are other authors who suggest that the loop should be removed once it has escaped into the peritoneal cavity. Nakamoto and Buchman in 1966 removed all 5 loops in spite of the fact that they were all asymptomatic. Macfarlan (1966) also removed it at once and did not wait for any symptoms. Ledger and Wilson in 1966 suggested that the device should be removed electively at a convenient time, as obstruction could occur if a loop of bowel got incorporated in the adhesions caused by the loop.

In the case reported, the patient was asymptomatic, but as she was willing for sterilization she was subjected to a laparotomy. The author is of the opinion that once the loop has escaped into the peritoneal cavity it is better to get it out at a convenient time because of the danger of intestinal obstruction, and secondly, because there is a psychological upset in such patients if the loop is left inside.

As regards the approach for removal, the patient can be subjected to a laparotomy or the loop could be removed by a colpotomy. Nanda (1966) removed the loop by colpotomy as it was in the pouch of Douglas. Nakamoto (1966) successfully removed one loop through a colpotomy;

the rest were removed by laparotomy. One case he subjected to a colpotomy first, but as the loop could not be removed, the patient had to have a laparotomy. This indicates that the safest procedure for removal of the loop is by laparotomy, though a colpotomy may be considered in selected cases where the loop is in the pouch of Douglas.

#### Summary

- (1) A case of perforation of uterus by Lippes loop is reported.
- (2) Literature has been reviewed.
- (3) The mode of perforation and management are discussed.

#### Acknowledgement

I would like to thank Mr. Bhavalkar, Librarian, Medical College Nagpur, for helping me with the references.

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