Microperforate Hymen in a Primigravida in Second Trimester with Anomalous Fetus

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Introduction

A wide range of anomalies are associated with the female genital tract. These anomalies have a devastating impact on the potential for sexual activity and fertility. Hymenal anomalies are one of them and include imperforate, microperforate (pin-hole), septate, cribriform, etc. Different from imperforate hymen, microperforate hymen (MH) may be asymptomatic until puberty when the women's quality of life is jeopardized. Depending on the size of the microperforation, MH's clinical features may be very similar to those found in imperforate hymen cases. However, MH may present with infectious complications since the accumulated secretion retained in the vaginal canal has contact with the external environment and therefore represents a source of entry for infectious agents. Pregnancy with microperforate hymen can occur, but it is rare. Sexual

intercourse leads to dyspareunia and disturbances in married life.

Case Report

A 24-year-old female who had spontaneous conception after 2 months of marriage presented to the Gynaec OPD of Bokaro General Hospital, Bokaro, Jharkhand, on June 03, 2017, with complaints of pain in abdomen and bleeding P/V after taking MTP pills at 16 weeks of POG. Anomaly scan done beforehand revealed single, live intrauterine fetus with bilateral enlarged echogenic kidneys and severe oligohydramnios suggestive of bilateral polycystic kidney (Fig. 1). So patient was advised termination, she took self-medication for MTP and came with bleeding per vaginum to OPD. General examination showed mild pallor, normal pulse and BP. Secondary sexual characteristics were normal showing normal changes of pregnancy. P/A examination corresponded to period of gestation with no FHS. On local examination both labia were normal with a normal external urethral opening. Vagina was covered by a tough membrane with a small opening described as pin-hole (microperforate) hymen through which bleeding occurred (Figs. 2, 3). On further questioning patient gave history of regular menstrual cycle lasting 6–7 days with passage of small clots. There was history of dyspareunia in every intercourse with husband reporting difficult penetration. Patient was admitted and USG showed a single intrauterine dead fetus of 16 weeks size with severe oligohydramnios and infantile polycystic kidney with normal adnexa. Maternal kidney, bladder and bowel were normal. Hematological and biochemical tests were within normal limits. Hymenectomy was planned for patient. Under spinal anesthesia cruciate incision was given in midline, excess redundant fragment of hymenal tissue was cut, side wall was repaired to form adequate introitus, and about 500 ml of clot was removed from vagina. Termination of pregnancy was done by giving oral misoprostol. Patient was discharged after 48 h. She was called for follow-up. Follow-up of the case after 2 weeks was done showing normal vagina and cervix with adequate introitus (Fig. 4).

Discussion

Hymen is an embryologic remnant that usually perforates during the later stages of embryonic development and remains as a thin fold of mucous membrane. Hymenal abnormalities are a part of urogenital sinus anomalies caused by a failure of the canalization process of the vaginal plate at the extreme caudal aspect [1]. Many authors have already emphasized the scarcity of

Fig. 1 Anomaly scan of foetus

Fig. 2 Bleeding through pinpoint opening in tough hymen covering vagina

Fig. 3 Figure showing pin hole hymen and urethral meatus

Fig. 4 Vagina after hymenectomy

publications on MH, and its rarity is recognized [1]. A review by Watrowski et al. found only 7 records, and they also reported a case of MH in dizygotic twins [1]. Common symptoms seen in hymenal malformations include primary amenorrhea, acute or chronic pelvic pain, abnormal vaginal bleeding, dyspareunia, dysuria and foul smelling vaginal

discharge. Infrequently, MH patients may have normal menstrual flow and pregnancy, but with complaints of dyspareunia and unsuccessful intercourse due to a closed vaginal orifice as observed in our case report. Differential diagnosis of MH includes imperforate hymen, Mayer–Rokitansky syndrome, transverse vaginal septum and labial adhesions [2]. Few cases of imperforate hymen have been reported in association with bifid clitoris, polydactyly, ureter duplication, hypoplastic kidney and imperforate anus, but these conditions have not been described in association with MH. However, MH has been reported in association with vaginal septa, mostly under 1 cm [3]. Illiteracy, ignorance and lack of physical examination at birth are the chief reasons of late diagnosis like in our case where the patient had not undergone regular trimester wise checkup. Vaginal examination should be done ideally at birth or in early pregnancy where on noticing an absent vaginal opening, patient should have been sensibly referred to higher center. Healthcare providers should be aware of this unusual entity which entails mandatory clinical examination. Standard surgical treatment of microperforate hymen involves hymenectomy. Techniques may vary according to the type of incision on the hymenal membrane (vertical, central or cruciate). Restenosis may occur specially when preservation of the annular-intact structure of the hymen is important due to social concerns. Inserting a Foley catheter through the operated hymen for 2 weeks or stitching the hymenal edges after a cruciate incision may prevent restenosis [4–6].

Ineffective use of mifepristone and misoprostol in first trimester of pregnancy has shown association with Moebius syndrome, joint and limb defects primarily due to

action of misoprostol [7]. Patients should be made aware about these risks of MTP pills.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Informed Consent Informed consent was obtained from the patient.

Ethical Statement Ethical clearance for the study was obtained from IRB (Institutional Hospital Review Board), Bokaro General Hospital.

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