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Research Article

**HYSTEROSCOPY AS GOLD STANDARD MANAGEMENT: A
DETAILED STUDY OF FOETAL BONE REMOVAL THROUGH
HYSTEROSCOPY AFTER UNSAFE ABORTIONS**¹Dr Filza Karim, ²Hafsa Mansoor, ³Dr. Umar Saleem¹Sir Ganga Ram Hospital Lahore, ²Madina Teaching Hospital Faisalabad, ³Mayo Hospital,
Lahore**Abstract**

An unsafe practice of abortion is the most neglected problems in the healthcare department in the underdeveloped countries of the world. Among multiple complications an unsafe abortion rare complication is retained foetal bone. The disease prevalence is about 0.15% in the patients experiencing hysteroscopy diagnostic. Patients presented the non-specific signs and symptoms. The research focuses on the abnormal uterine bleeding, subfertility, abnormal vaginal discharge, lower abdominal pain, dysmenorrhea, dyspareunia and bony fragments spontaneous passage. Fragments of retained foetal bone may also be a reason of a disease of acute pelvic inflammation in some of the patients without any due consideration of time interval after the act of an abortion. This persistent condition may also pose repeated occurrences of vaginitis or antimicrobial endometritis refractory management. Foreign body in the cavity of uterine is also to be considered. There is a need for the primary assessment of such patients through ultrasonography which is of very much clinical importance for various diagnostic assessments on case to case basis. In this research we have presented a case of missed retained foetal bone complication diagnosis having repeated acute disease of pelvic inflammation and vaginal discharge studied at Sir Ganga Ram Hospital from May to September 2017.

Keywords: *Retained Foetal Bone, pelvic inflammatory disease (PID), Pelvic Pain and Recurrent Vaginal Discharge.*

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INTRODUCTION:

An unsafe practice of abortion is the most neglected problems in the healthcare department in the underdeveloped countries of the world. The women often face this disorder in the reproductive period of life [1]. All over the world, the estimate of an unsafe abortion is about twenty million per year performed by non-skilled personnel [2]. About seventy-eight thousand deaths are caused because of unsafe abortion all over the world every year and half of these deaths are reported in Asian Countries [3]. Among various complications of the unsafe practice of abortions the complications of retained foetal bone is also very much concerned. The foetal bone presence within the cavity of uterine is a serious threat for the fertility of the women as it is among rare foreign bodies' form is present in the uterus which has numerous associated complications with an unknown aetiology and incidence.

The disease prevalence is about 0.15% in the patients experiencing hysteroscopy diagnostic [4]. About 11.9% is accounted for the removal of foreign bodies through hysteroscopy from the uterus in all the patients experiencing the treatment of infertility [5]. This diagnosis is seldom approached before any surgical intervention. It is also evident from the literature review of various other research studies that fragments of foetal bone have been reported in the initial stage and after the act of pregnancy termination (8 weeks to 15 years) having an association with the induced or spontaneous history [6, 7]. Patients presented the non-specific signs and symptoms. The research focuses on the abnormal uterine bleeding, subfertility, abnormal vaginal discharge, lower abdominal pain, dysmenorrhea, dyspareunia and bony fragments of spontaneous passage [7, 8]. These cases are generally neglected for the persistent rare vaginal discharge which may cause a delay in the disease diagnostic. There is a

need to emphasize on the completion of the full therapy by the patients and role of clinicians is very much important in this aspect of educating the patients with a focus on the follow-up visits [9]. Past cases of pregnancy termination also pose other associated risk factors which are a serious consideration as well. Fragments of foetal bone in the cavity of uterine also present recurrent PID and vaginitis. In this research, we have presented a case of missed retained foetal bone complication diagnosis having repeated acute disease of pelvic inflammation and vaginal discharge.

CASE REPORT:

A patient of twenty-six years of age with multipara status reported an irregular vaginal bleeding and chronic vaginal discharge and lower abdominal pain along with induced abortion history before three years. She also presented an episode of unsafe abortion with minimal dysmenorrhea and an irregular menstrual cycle for one year of the time period. The patients also visited the doctor complaining her about the incidence of pelvic infection and chronic vaginal discharge. Previously, she also received the management for pelvic infection and vaginitis. None of the therapies was on the basis of sexually transmitted disease or PID. She did not receive any transvaginal or pelvic ultrasonography after the act of abortion. We performed her first ever pelvic and physical assessment at the hospital. It was learnt through a pelvic assessment that the position and size of the uterus were normal. We also detected adnexal and uterine tenderness and PID suggestive purulent vaginal discharge through pelvic assessment. Several linear intensely hyperechoic structures also observed through transvaginal ultrasound filling endometrial cavity and cervical canal till minimal fluid collection and fundus was identified in Douglas Pouch (Figure – I).

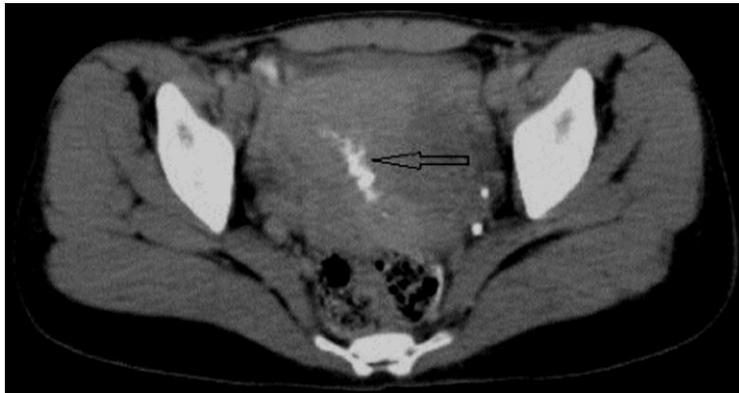
Figure – I: Several echoic structures of the linear intensity filling the endometrial cavity and cervical canal till fundus



The patient had no insertion of intrauterine device history. For differential diagnosis of direct abdominal X-ray, acute abdominal pain and (CT) computerized tomography also performed on the patients. Calcified

structures were visible as seen through computerized topography in the uterine cavity and cervical canal (Figure – II).

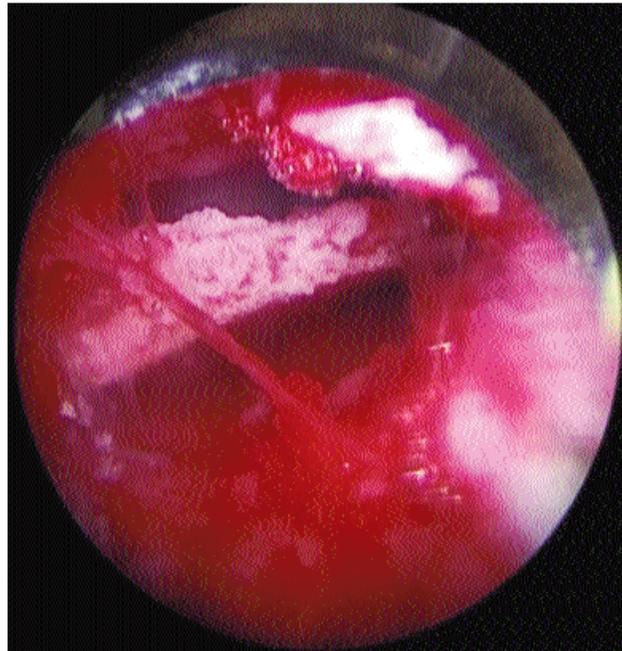
Figure – II: Uterine cavity with echogenic linear materials (as pointed by the arrow sign)



In the preliminary diagnosis, there was a foreign body in the uterus that also had a cute PID complication as well. After two treatment weeks with metronidazole and doxycycline, we secured an

informed consent of the patient and after that patients experienced hysteroscopy. We observed a large amount of calcified, thin, coral-like bone material in the uterus (Figure – III).

Figure – III: Thin, coral-like, calcified bony materials as reported through hysteroscopic assessment



We removed these structures through a bipolar hysteroscopic resectoscope and the endometrial cavity was normal in its appearance. There was a compatibility between macroscopic appearance and foetal bone. It was also evident through histological evaluation that mature necrotic bone with bone marrow formation in the multiple areas along with megakaryocytes was present. Three days hospital stay was enough and after that patient was no more in the hospital with zero complaints till three months of disease management.

DISCUSSION:

Foetal bone presence within the cavity of uterine is a very rare form of the uterus foreign bodies with an unknown aetiology and incidence among patients. Its development is secondary to missed abortions, an incomplete abortion, spontaneous miscarriages or therapeutic abortion which occur in the time span of more than three months of the gestational age followed by endochondral ossification [10]. These intrauterine structures of bone are among common ultrasound assessment practice and presence of foetal bone has an association with irregular vaginal bleeding, subfertility, dyspareunia, cervicitis, spontaneous foetal bone passage and pelvic pain. Retained foetal bones also increase with the increased menstrual prostaglandins production. The patients with retained foetal bone also report increased menstrual prostaglandin E levels (PGE) and levels of prostacyclin; there is a decrease in these incidences

after the successful removal of such foreign materials. The mechanism is same as of the mechanism of the contraceptive intrauterine device [11]. Better outcomes are also possible through implementing blastocyst, uterine cavity milieu and sperm mobility. These foetal bones are mostly visible during infertility evaluations. The elevated PGE levels possibly have an association with pelvic pain, menstrual function and dysmenorrhea [7]. Our patient reported an irregular vaginal bleeding, and chronic vaginal discharge and lower abdominal pain along with induced abortion history before three years. She also presented an episode of unsafe abortion with minimal dysmenorrhea and an irregular menstrual cycle for one year of the time period. The patients also visited the doctor complaining her about the incidence of pelvic infection and chronic vaginal discharge. Previously, she also received the management for pelvic infection and vaginitis. None of the therapies was on the basis of sexually transmitted disease or PID. She did not receive any transvaginal or pelvic ultrasonography after the act of abortion. We performed her first ever pelvic and physical assessment at the hospital. Transvaginal ultrasonography can possibly increase the chances of a correct disease diagnosis as intrauterine echogenic area presence alerts the physician. Among differential diagnosis about the unusual outcomes, we include Sherman's syndrome, intrauterine devices (IUD), foreign bodies, calcified submucous fibroids and mixed mesodermal tumours. We did not count

Sherman's syndrome as there was no amenorrhea or hypomenorrhea history among the patients. We can detect retained products through the dilated endometrial cavity, the presence of echogenic material and an irregular shape. Differential diagnosis depends on the bone marrow presence which is available in fragments and past pregnancy termination history. The diagnosis had a compatibility with the termination of pregnancy and histopathological evaluations in this particular case. Literature review shows that there was no detection of an acute PID secondary to retained foetal bones within uterus after many years. In this particular case, it seemed that PID is a late foreign body complication within the cavity of uterine. Accurate diagnosis is also depending on two elements of detailed history and suspicion [12]. The true gold standard is undoubtedly hysteroscopy which is also true in this case as well. Retained bones removal through hysteroscopy is effective for fertility restoration and symptomatic relief. Another research utilized (GnRh) gonadotropin-releasing hormone before the foetal bone removal process. The management of preoperative drugs produced better outcomes to observe retained bones removal and abnormal tissue easily [4]. We did not require any (GnRh) as we removed all abnormal tissues through hysteroscopy.

CONCLUSION:

Fragments of retained foetal bone may also be a reason for a disease of acute pelvic inflammation in some of the patients without any due consideration of time interval after the act of an abortion. This state may also pose the chances of endometritis refractory to empirical antimicrobial therapy or recurrent vaginitis. An exact diagnosis is possible through a gold standard modality (Hysteroscopy) for the intrauterine pathologies' assessment with minimal invasive management of these patients.

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