International Journal of Clinical Obstetrics and Gynaecology

ISSN (P): 2522-6614
ISSN (E): 2522-6622

www.gynaecologyjournal.com
2021; 5(1): 366-367
Received: 27-10-2020
Accepted: 25-12-2020

Dr. Shazia Nisar
Senior Resident, Department of Obstetrics and Gynecology, SKIMS, Soura, Srinagar, Jammu and Kashmir, India

Corresponding Author:
Dr. Shazia Nisar
Senior Resident, Department of Obstetrics and Gynecology, SKIMS, Soura, Srinagar, Jammu and Kashmir, India

Osseous metaplasia of endometrium: A cause of infertility

Dr. Shazia Nisar

DOI: https://doi.org/10.33545/gynae.2021.v5.i1f.841

Abstract
Osseous Metaplasia of endometrium is a very rare clinical entity responsible for causing infertility. It is believed to be conversation of fibroblasts to osteoblasts as a result of chronic inflammation, chronic endometritis, tuberculosis, previous abortion. Patients may be either asymptomatic being detected incidentally on USG or it may cause menstrual irregularities with infertility. Diagnosis being made by USG and hysteroscopy along with histopathological examination. Hysteroscopy is diagnostic as well as therapeutic.
Case report: A 30 year old female with history of menstrual irregularities and primary infertility. Patient had history of pulmonary tuberculosis in past. Her baseline investigations were normal she underwent diagnostic laparoscopy. Endometrial curettage showing osseous Metaplasia. Hysteroscopy was done in this patient that was both diagnostic as well as therapeutic.

Keywords: Osseous metaplasia, endometrium, cause of infertility

Introduction
Osseous Metaplasia of Endometrium is a rare clinical entity that presents with mature or immature bone in Endometrium. Various theories have been proposed and the most accepted theory is Metaplasia of stromal cells into osteoblastic cells [1, 2, 3]. Although this condition is rare with incidence of 3/10000 [4] but it is a cause of infertility (primary as well as secondary). Most of these cases show association with previous abortion [5] or chronic endometritis, prolonged oestrogen exposure, chronic intake of calcium and vitamin D. Tubercular endometritis can also lead to osseous Metaplasia and should be ruled to especially in India [6]. Diagnosis is made by ultrasound examination of pelvis showing acoustic shadow suggestive of calcification. Confirmation is done by hysteroscopy that is both diagnostic and therapeutic and improves chances of spontaneous conception.

Case report
A 30 year old female that presented with irregular cycles with oligomenorrhea and hypomenorrhea. She was married for 6 years and presented with history of pulmonary tuberculosis in past. The patient reported to me as case of Primary infertility. She had no history of thyroid disorders, galactorrhea. Her general examination and pelvic examination was normal. All investigations we're done in her that included CBC complete blood count, kidney function tests KFT, Liver function tests LFT, follicular stimulating hormone FSH, luteinizing hormone LH, anti mullerian hormone AMH, Serum Estradiol, Husband semen analysis, Thyroid function tests TFT, serum prolactin, USG pelvic organs. All investigations were normal however her USG pelvic organs showed linear bands suggestive of calcification. She was planned for diagnostic Laparoscopy with chromotubation patient refused for hysteroscopy. On laparoscopy everything was normal uterus was normal externally, fallopian tubes were normal, there was no endometriosis. Dye test was done which was positive on both sides. Endometrial curettage was done and curettings were send for Histopathological examination and Acid fast bacillus culture with PCR for tuberculosis. AFB culture and PCR was negative. Histopathological examination following was seen; Sections studied show multiple fragmented biopsy showing endometrial glands and stroma Glands are small round, tubular and occasional elongated glands lined by columnar epithelium.

There are multiple areas of osseous metaplasia

She was further planned for hysteroscopy. Hysteroscopy was done and multiple small bony fragments were found, that were removed by hysteroscopy Uterine cavity was restored to normal. Post-operative period was however uneventful.

Discussion

Osseous Metaplasia is a very rare clinical entity, only 9 cases have been reported from India [7].

It is also called as intrauterine bone formation, heterotropic bone formation, endometrial ossification. Most of the patients present as secondary infertility though ours was a case of Primary infertility, patients may present post abortion or normal delivery following which it may take 8 weeks to 10 years for ossification to occur. Patients may be either asymptomatic or may present with menstrual irregularities with infertility. Long back in year 1884 Virchow attributed this endometrial ossification to spontaneous differentiation of fibroblasts to osteoblasts [8].

Actually it is believed that chronic inflammation is a precursor for this osseous differentiation.

Inflammation can be secondary to chronic endometritis, tuberculosis, retained products of conception from previous abortion [9] The exact mechanism for infertility is believed that this osseous Metaplasia acts as intra uterine contraception device that prevents conception.

Differential diagnosis of osseous Metaplasia includes endometrial tuberculosis, mixed malignant mesodermal tumour retained fetal bones after abortion [10].

Hysteroscopy is both diagnostic as well as therapeutic. Hysteroscopy can be done laparoscopically to prevent uterine perforation in case of extensive ossification. Literature has shown good conception rates following hysteroscopy that is same in our case.

Conclusion

Osseous Metaplasia though a rare condition can be encountered in clinical picture which presents as infertility with menstrual irregularities. Hysteroscopy being diagnostic as well as Therapeutic.

References

1. Bhatia NN, Hoshiko MG. Uterine osseous Metaplasia. Obstet Gynecol 1982;60:256-9.
2. Shroff CP, Kudterkar NG, Badhwar VR. Endometrial ossification-report of three cases with literature review. Indian J Pathol Microbiol 1985;28:71-4.
3. Waxman M, Mousseuris HF. Endometrial ossification following an Abortion. Am j Obstet. Gynecol 1987;130:587-8.
4. Adamson NEJR, Sonmers SC. Endometrial ossification: report of two cases. Am j Obstet. Gynecol 1954;67(1):187-190.
5. Nderoglu LS, Yarali H, Gultekin M, Katlan D. Endometrial osseous Metaplasia: An evolving cause of secondary infertility. Fertil. Steril 2008;90(5);e9-11.
6. Shroff CP, Kudterkar NG, Badhwar VR. Endometrial ossification-report of three cases with literature review. Indian J Pathol Microbiol 1985;28:71-4.
7. Singh P, Kapur K, Singla S, Naz N. Endometrial osseous Metaplasia and mature bone formation with extra medullary hematopoiesis. J Hum Reprod. Sci 2011;4(1):56-57.
8. Rose-e-Silva JE, Barcelos ID, Navarro PA, Rosa-e-Silva ACJ, Nogueira AA, Ferriana RA. Osseous Metaplasia of endometrium associated with infertility: A case report and review of the literature. J Med case Rep 2009;3:74-27.
9. Caynela E, Perez-Medina T, Vilanova J, Alejo M, Canadas P. True osseous Metaplasia of endometrium: the bone is not from a fetus. Fertil. Steril 2009;91(4):1293.e1-1293.e4
10. Madaan M, Suman S, Sharma R, Kapoor N, Garg P, Raj SS. Osseous Metaplasia of endometrium and successful hysteroscopic resection: report of two cases and a review of the literature. Asian J Endosc Surg 2015;8(1):63-6.