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**Case Report**

# A case report of xanthogranulomatous inflammation of a tubo-ovarian mass

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## ABSTRACT

Although uncommon, xanthogranulomatous inflammation of the female reproductive system frequently manifests in the endometrium. There have only been a few documented incidences affecting the ovary. It may resemble ovarian cancer in its clinical presentation, radiological characteristics, and other aspects. Clinicians and pathologists should be aware of the importance of pre-diagnosing this inflammatory lesion in order to avoid misdiagnosis and drastic surgical treatment. This case report elaborates how a 60-year-old female patient with a tubo-ovarian tumor was suspected of having cancer based on clinic-radiological symptoms, but histological confirmed the ultimate diagnosis of xanthogranulomatous inflammation of an tubo ovarian mass.

**Keywords:** Oophoritis, Xanthogranulomatous, Inflammation, Tubo ovarian mass

## INTRODUCTION

Xanthogranulomatous inflammation is a chronic inflammatory condition which is due to the destruction of the affected organ. It is primarily found in the kidneys, bladder, stomach, bones, male reproductive organs, gallbladder, and so forth.[1] Inflammation of the female genital tract caused by xanthogranulomatous is rare and typically occurs in the endometrium. There have only been a few documented incidences affecting the ovary.[2] The inflammation mostly comprising lipid-containing macrophages, lymphocytes, plasma cells, multinucleated giant cells, and neutrophils.[3] It can mimic a neoplastic lesion clinically, radiologically, and on gross examination by presenting as a mass lesion in the pelvic cavity and invading adjacent tissue.

## CASE REPORT

A 65-year-old postmenopausal women with hypertension and diabetes came with complaints of abdominal pain for past one week which is severe in nature, intermittent and not radiating. She also had complaints of loose stools, vomiting, loss of appetite, and loss of weight. She gave history of no white discharge, post-menopausal bleeding, and mass descending per vagina. She attained menopause 10 years back and her last child birth 43 years back. There was no history of tuberculosis infection, carcinoma in the family.

On examination she was mildly pallor with bilateral pitting pedal oedema present till ankles. Per abdomen it was a distended with Mass of size 24×26 cm extending till umbilicus and occupying both iliac fossa, cystic in consistency with regular borders. Lower border couldn't be made out, diffuse tenderness present over the mass. With per speculum cervix was pulled up and could not be visualised, vagina healthy, no abnormal discharge or polyp. And on vaginal examination uterus retroverted and mass of 24-26 weeks size with cystic consistency present up to umbilicus, cervix posterior, and mass could not be differentiated separately from uterus, forniceal fullness present and with mild bilateral forniceal tenderness.

***Investigation***

Total counts and renal parameters found to be elevated. Tumour markers were sent and reported normal. In Ultrasound imaging a well-defined pelvic abdominal cystic lesion extending superiorly till the umbilical region with thick homogenous internal echoes within and shows few hyperechoic areas within (Figure 1). On colour Doppler no internal vascularity noted. Both ovaries are not visualised separately, likely ovarian neoplastic aetiology. Tiny gall bladder polyp. Colour Doppler of bilateral lower limbs no evidence of deep vein thrombosis at present scan. Magnetic radio-imaging done showed large pelvo-abdominal unilocular thick-walled cystic lesion with a small mural nodule. Both ovaries not visualised. Mild to moderate ascites with diffuse mild omental thickening.

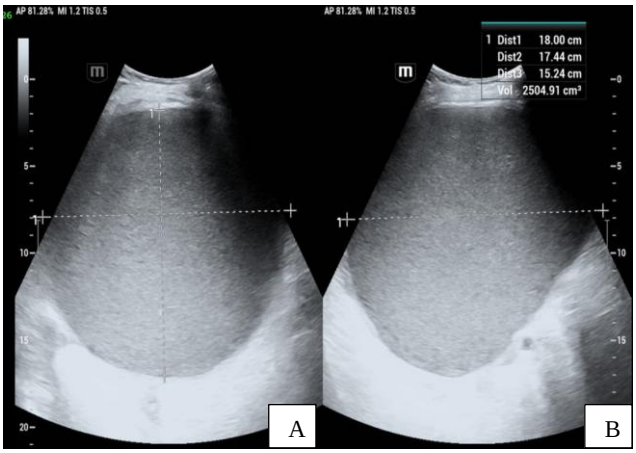


**Figure 1 (A and B): Ultrasound image of tubo-ovarian mass.**

***Preoperative findings***

Preoperatively nephrology opinion was sought in view of elevated renal parameters and treated with supportive measures. Patient also had fever spikes and were managed accordingly. Patient was planned and underwent exploratory laparotomy and proceed.

***Intraoperative findings***

Midline vertical incision was made and abdomen opened in layers, Peritoneal fluid of 50ml present and same taken for cytology, CBNAAT and AFB. Frozen pelvis present. Anatomy was distorted, uterus and ovaries not delineated separately due to frozen pelvis. Large ovarian mass of size 20×10 cm arising from right adnexa looked haemorrhagic, onion layering in one area. Twisted once (torsion) with right fallopian tube overstretched on it. Same ovarian mass encased in flimsy adhesions with bowel peritoneum with caveating material found adherent through abdominal cavity mimicking TB. Adhesions released and small atrophic uterus found beneath the mass. After releasing adhesions Total abdominal hysterectomy with right salphingo-ovariotomy with left salphingo-ophorectomy done.

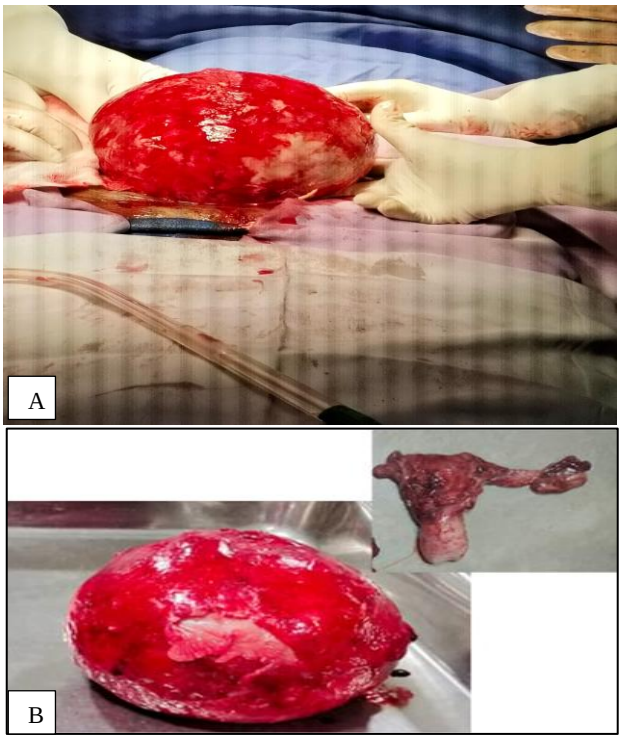


**Figure 2 (A and B): Intraoperative finding during staging laparotomy showing the tubo ovarian mass in the right side, uterus with cervix along with left fallopian tube and ovary.**

***Reports***

Ascitic fluid for cytology reported negative for malignancy, ascitic fluid for CBNAAT -negative. Grossly, globular ovarian mass of size 20×18×12 cm attached with fimbrial end of fallopian tube cut surface letting out purulent like pus with no solid areas (Figure 2 A). Cervix showing chronic papillary endocervicitis with nabothian cysts and Endometrium with atrophic changes and leiomyoma of the myometrium (Figure 2 B).

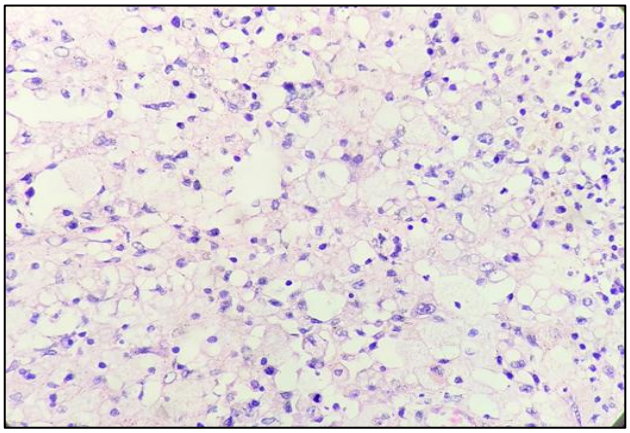

**Figure 3: Microscopic image of Foamy macrophage.**

Microscopically, cyst was showed fibro- collagenous tissues lined by collection of foamy macrophages, focal giant cell reaction along with dense acute on chronic inflammation cell infiltrate composed of lymphocytes, plasma cells, neutrophils and fibrinoid necrosis. Thus, diagnostic tubo-ovarian abscess with xanthogranulomatous inflammation (Figure 3).

## DISCUSSION

Female genital organs are infrequently impacted by xanthogranulomatous inflammation, which is often limited to the endometrium. India has only recorded a small number of cases with xanthogranulomatous oophoritis.[1] The clinical manifestations include fever, abdominal mass, and abdominal pain. A sensitive adnexal lump during gynecological examination.[4] Because it affects nearby organs, radiological xanthogranulomatous inflammation can resemble malignant ovarian tumor. The normal ovarian parenchyma is replaced by a tumor-like, yellow-colored nodule mass that is occasionally cystic due to liquefactive necrosis. The inflammation extends beyond the ovary, affecting the surrounding organs, most commonly the fallopian tube and the pelvic peritoneum, which raises the possibility that the lesion is malignant.[5,6] Xanthogranulomatous granulation can be diagnosed as either a neoplastic or non-neoplastic disorder, with the latter being the more common. The non-neoplastic conditions includes infections, PID, endometriosis, ineffective/unsuccessful antibiotic therapy, intrauterine contraceptive device, tuberculosis which can be differentiated from xanthogranulomatous granulation; the, which can be ruled out using specific stains and culture.[7] When xanthogranulomatous inflammation is seen as cytoplasmic concentric calcific forms (Michaelis–Gutmann bodies), malakoplakia is one of the differential diagnosis.[3]

## CONCULSION

Xanthogranulomatous inflammation of a tubo-ovarian mass is a rare lesion whose clinical manifestations, imaging modalities and gross features can mimic ovarian malignancy. Thus, a preoperative diagnosis of this entity should be considered to avoid radical surgical treatment. But the final confirmation of the diagnosis can only be made after histopathological examination.

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## REFERENCES

1. Inoue T, Oda K, Arimoto T, Samejima T, Takazawa Y, Maeda D, et al. Xanthogranulomatous inflammation of the perimetrium with infiltration into the uterine myometrium in a postmenopausal woman: a case report. BMC Womens Health. 2014;14(1):82.
2. Rawal G, Zaheer S, Dhawan I. Xanthogranulomatous Oophoritis Mimicking an Ovarian Neoplasm: A Rare Case Report. J -Life Health. 2018;9(1):41.
3. Bhatnagar K, Narang V, Garg B, Sood N. Xanthogranulomatous Oophoritis: A Rare Case Report. Iran J Pathol. 2018;13(3):372-6.
4. Girdher S, Ahuja S, Naaz S, Ahluwalia C, Yadav AK, Zaheer S. Xanthogranulomatous oophoritis: A case series and literature review. J Med Surg Public Health. 2023;1:100016.
5. Gami N, Mundhra R, Guleria K, Arora V, Garg S. Recurrent pyometra and xanthogranulomatous salpingitis: A rare pathologic association in a postmenopausal lady. J -Life Health. 2014;5(3):156.
6. Shukla S, Pujani M, Singh S, Pujani M. Xanthogranulomatous oophoritis associated with primary infertility and endometriosis. Indian J Pathol Microbiol. 2010;53(1):197.
7. Manandhar T, Rajbhandari S, Thakur A, Bhandari S, Dhakal S. Xanthogranulomatous Salpingo-Oophoritis Presenting as an Ovarian Malignancy. Cureus. 2021;13(2):e13363.

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