Global Journal of Reproductive Medicine
ISSN: 2575-8594

Juniper Publishers
key to the Researchers

Case Report
Volume 11 Issue 1 - December 2024
DOI: 10.19080/GJORM.2024.11.555804

Glob J Reprod Med

An Uncommon Culprit: A Case Report of Ovarian Actinomycosis

Kavitha A[1]* and Kavita V[2]

[1]*Consultant pathologist, Metropolis healthcare limited, India*

[2]*Associate vice president, Chief of laboratories, Metropolis healthcare limited, India*

Submission: November 21, 2024; **Published:** December 12, 2024

***Corresponding author:** Kavitha A, Consultant pathologist, Metropolis healthcare limited, India

Abstract

Background: Ovarian actinomycosis is a rare and often misdiagnosed condition caused by the bacterium Actinomyces Israeli. It typically presents in women with a history of intrauterine devices (IUDs) or pelvic inflammatory disease. Due to its atypical presentation, it can be easily confused with other gynaecological disorders.

Case Presentation: We report a 34-year-old female with a history of an IUD placement who presented with persistent abdominal pain and abnormal vaginal discharge. Initial imaging studies suggested a possible ovarian tumor, prompting surgical intervention. Histopathological examination of the excised tissue revealed the presence of Actinomyces organisms, confirming the diagnosis of ovarian actinomycosis.

Discussion: This case underscores the importance of considering ovarian actinomycosis in women with risk factors presenting with pelvic symptoms. Early recognition and appropriate treatment are crucial, as the condition may mimic more common gynaecological issues, leading to unnecessary surgeries or mismanagement.

Conclusion: Ovarian actinomycosis is a rare but significant diagnosis that requires heightened clinical awareness. This case highlights the need for further research and education regarding this unusual infection to improve diagnostic accuracy and patient outcomes.

Keywords: Gastrointestinal tract; Intrauterine devices; Ectopic pregnancies; Ovarian actinomycosis

Introduction

Ovarian actinomycosis is a rare infectious disease caused by Actinomyces Israeli, a gram-positive anaerobic bacterium typically found in the human oral cavity and gastrointestinal tract. Although it is more commonly associated with pelvic inflammatory disease and the use of intrauterine devices (IUDs), its presentation in the form of ovarian involvement is infrequent and often misdiagnosed as malignancy or other gynaecological conditions [1, 2]. Actinomycosis may lead to chronic pelvic pain, abdominal discomfort, and unusual vaginal discharge, symptoms that overlap with a variety of common gynaecological disorders. This can complicate the clinical diagnosis, often delaying appropriate treatment [3]. The rarity of ovarian actinomycosis has led to limited awareness and understanding among healthcare providers, resulting in challenges in diagnosis and management.

Case presentation

A 34-year-old female patient, presented with chronic abdominal pain. On radiology, revealed an ovarian mass. Cystectomy was performed. Patient had history of intra-uterine device. Histology revealed ovarian parenchyma with dense mixed inflammatory cell infiltrate composed predominantly of neutrophils. In multiple foci there are slender filamentous bacteria surrounded by neutrophils, exhibiting splendor-hoeplli phenomenon. Special stain for fungus GMS: Highlights the bacterial colonies (Figure 1-3).

Discussion

Ovarian actinomycosis is a rare and often overlooked infection, predominantly caused by Actinomyces Israeli. Its association with the use of intrauterine devices (IUDs) is well documented, as these

devices can introduce bacteria into the pelvic cavity, leading to chronic infection and inflammation [1]. In our case, the patient's history of IUD placement highlighted this risk factor, which is crucial for clinicians to consider when evaluating patients with persistent pelvic symptoms. The clinical presentation of ovarian actinomycosis can be quite variable, often mimicking more common conditions such as ovarian tumors or ectopic pregnancies [2]. Symptoms typically include chronic pelvic pain, abnormal vaginal discharge, and, in some cases, fever or weight loss. The diagnostic challenge lies in the non-specific nature of these symptoms, which can lead to delayed diagnosis and inappropriate management [3]. Imaging studies, such as ultrasound and MRI, may reveal adnexal masses that are indistinguishable from neoplastic processes, further complicating the clinical picture [4].

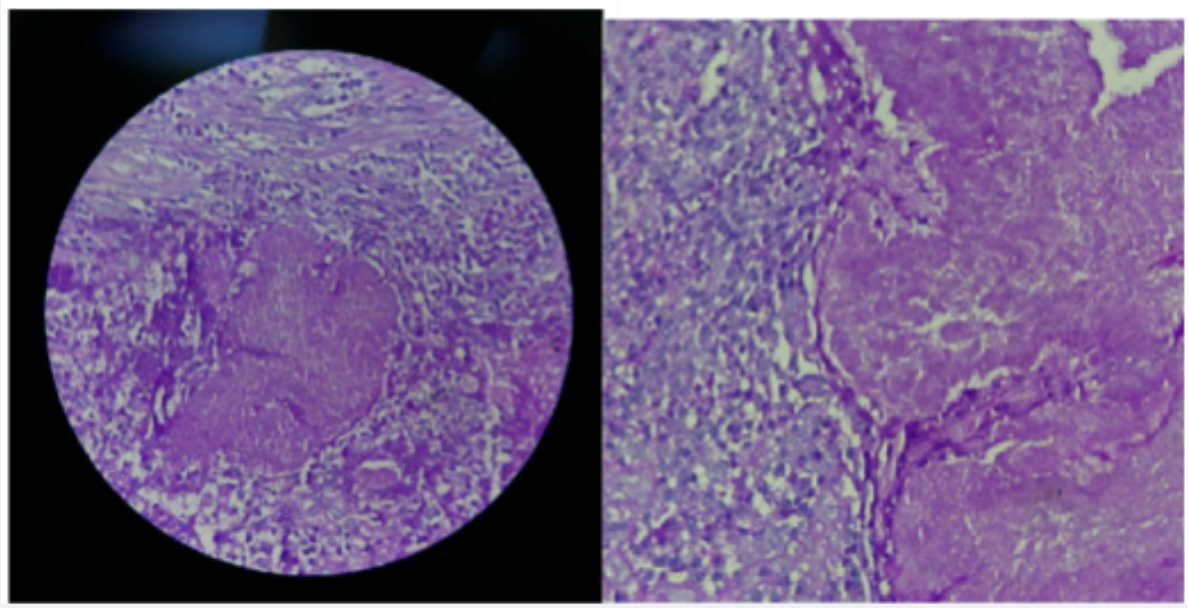

Figure 1 & 2: Sections show ovarian parenchyma with dense mixed inflammatory cell infiltrate composed predominantly of neutrophils. In multiple foci there are slender filamentous bacteria surrounded by neutrophils, exhibiting Splendore-Hoeppli phenomenon (H&E 10x and 40 x).

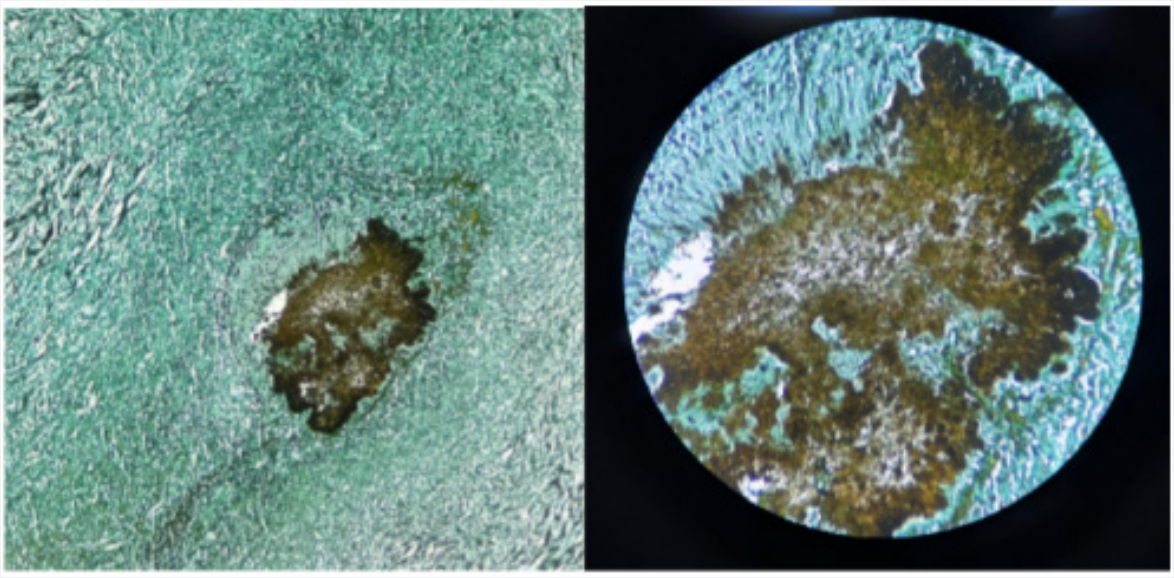

Figure 3: Sections shows Gomori methamine silver stain, highlighting Actinomycotic colonies.

How to cite this article: Kavitha A, Kavita V. An Uncommon Culprit: A Case Report of Ovarian Actinomycosis. Glob J Reprod Med. 2024; 11(1): 555804. DOI: 10.19080/GJORM.2024.11.555804

Histopathological examination is the gold standard for diagnosis, often revealing sulfur granules characteristic of actinomycosis [5]. However, these granules may not always be present, and cultures can take time to yield results, emphasizing the need for a high index of suspicion based on clinical history and presentation. In our case, surgical intervention not only facilitated the diagnosis but also provided immediate therapeutic benefits, as timely treatment with antibiotics is crucial for resolving the infection [6]. Treatment typically involves a combination of surgical intervention and prolonged antibiotic therapy,

with penicillin being the first-line treatment [7]. The duration of antibiotic therapy can range from several weeks to months, depending on the severity of the infection and the patient's response to treatment. In cases where surgical resection is performed, it is essential to ensure complete removal of infected tissue to prevent recurrence. Overall, this case underscores the importance of recognizing ovarian actinomycosis as a differential diagnosis in women presenting with pelvic masses, particularly those with risk factors such as IUD use. Increased awareness among healthcare providers can lead to earlier diagnosis and more effective management, ultimately improving patient outcomes.

Conclusion

Ovarian actinomycosis, while rare, presents a significant diagnostic challenge in gynaecology due to its nonspecific symptoms and the potential for misdiagnosis as malignancy or other common conditions. This case underscores the necessity for heightened awareness among healthcare providers regarding the association of actinomycosis with intrauterine devices and chronic pelvic symptoms. Early diagnosis, facilitated by a high index of suspicion and appropriate imaging, is crucial for effective management. The successful treatment of ovarian actinomycosis typically involves a combination of surgical intervention and prolonged antibiotic therapy, with penicillin as the first-line treatment. This case contributes to the growing body of literature emphasizing the importance of recognizing this condition to prevent complications and improve patient outcomes. As awareness of ovarian actinomycosis increases, we hope to see more timely diagnoses and successful management strategies, ultimately enhancing the quality of care for affected patients.

References

1. Shakoor Z, Qadir S, Shamsher A (2019) Ovarian actinomycosis mimicking an ovarian tumor: A case report. BMC Infect Dis. 19(1): 34.
2. Wong K, Lee J, Lau H (2018) Actinomycosis of the female reproductive tract: A review of the literature. Gynecol Oncol Rep 25: 67-72.
3. Dhanasekaran A, Jha P, Mukherjee S (2020) A case of actinomycosis of the ovary mimicking an ovarian neoplasm: A diagnostic challenge. J Obstet Gynaecol 40(4): 487-490.
4. Althubaiti A, Alkhathlan A, Bafakeeh O (2021) Imaging findings of actinomycosis in the female reproductive system: A case series. Radiol Case Rep 16(10): 2914-2918.
5. Mernick M, Klugman M, Bhagat V (2019) Actinomycosis: A diagnostic challenge in the era of modern imaging. Clin Radiol 74(9): 718-725.
6. Vilasboas M, Lima L, Lanza F (2020) Surgical management of actinomycosis: A review of the literature. Surg Infect 21(6): 481-485.
7. Tully M, Abou Chakra M, Phelan N (2022) The role of antibiotics in the management of actinomycosis: A review. Int J Infect Dis 115: 187-194.

DOI: 10.19080/GJORM.2024.11.555804

How to cite this article: Kavitha A, Kavita V. An Uncommon Culprit: A Case Report of Ovarian Actinomycosis. Glob J Reprod Med. 2024; 11(1): 555804. DOI: 10.19080/GJORM.2024.11.555804