Journal of Dermatology and Dermatopathology
Volume 4 | Issue 1
ISSN: 2770-839X

Case Report Open Access

A Rare Case Report of Necrotizing Fungal Inflammation in a Case of Ganglion Cyst: A Clinical and Microscopic Mismatch

Monica Mishra*, Gunvanti Rathod

Department of Pathology and Lab Medicine, AIIMS, Bibinagar, India

***Corresponding Author:** Monica Mishra, Department of Pathology and Lab Medicine, AIIMS, Bibinagar, India, Tel.: 06372580204, E-mail: mishra.monica1@gmail.com

Citation: Monica Mishra, Gunvanti Rathod, Deepankar Satapathy, Alisha Khan (2025) A Rare Case Report of Necrotizing Fungal Inflammation in a Case of Ganglion Cyst: A Clinical and Microscopic Mismatch, J Dermatol Dermatopathol 4(1): 101

Received Date: January 19, 2025 **Accepted Date:** February 19, 2025 **Published Date:** February 24, 2025

Abstract

Necrotizing granulomatous inflammation in swellings which are clinically diagnosed as ganglion cyst is a rare entity due to the non-specific clinical presentation, insidious course, and large number of mimickers at this the particular site.Our patient is a 47 year/female who presented with a swelling over wrist for one year. On examination it was found to be firm, lobulated, mobile swelling, non-tender. USG showed cystic soft tissue swelling with a impression of ganglion cyst. Grossly the swelling was measuring 4x4 cm which was gradually progressive, increasing in size. This case report highlights the rare site of a granulomatous fungal inflammation clinically presenting as a multilocular ganglion cyst.

Keywords: Necrotizing granulomatous inflammation; ganglion cyst; Aspergillus

Introduction

Necrotizing granulomatous inflammation in swellings which are clinically diagnosed as ganglion cyst is rare due non-specific clinical presentation, insidious course, and large number of mimickers at this site. Aspergillus is an airborne lung infection and finding aspergillosis in a cyst as a primary site is rare if the patient is immunocompetent but the chances of this infection has increased in the past years [1, 2].Skin and soft tissue fungal infections caused by aspergillus infection is an uncommon manifestation often encountered in patients who had repeated episodes of skin trauma [1]. Secondary cutaneous aspergillosis can occur because of direct spread from focal points like paranasal sinus,lungs [1]. And also the chances of getting the infection increases if the patient is immunocompromised due to the impaired phagocytic activity [1-3].Almost all organs may be involved although musculoskeletal system is relatively uncommon. This case report highlights the rare site of a granulomatous fungal inflammation clinically presented as a multilocular ganglion cyst.

Case Report

Our patient is a 47 year/female who presented with a swelling over wrist for one year. On examination it was found to be firm, lobulated, mobile swelling, non-tender. On USG it was found to be cystic soft tissue swelling. Grossly the swelling was measuring 4x4 cm which was gradually progressive, increased to a size of 4x4 cm. The patient was house wife by occupation did not have history of trauma, and also did not give history of any prior fungal infection.

Discussion

A vast variety of lesions can be lesions seen at wrist can be seen having a variety differential at wrist from benign, malignant tumors like myxoma, low grade myxofibrosarcoma. But encountering fungal infection in lesions which are clinically diagnosed as a ganglion cyst is a rare finding. Fungal infections of the upper extremity is rare but can be seen to increasing incidence of immunosuppression and rise of immunodeficient patients, chronic granulomatous disease, trauma may be few of the factors [1, 2, 4]. Apart from this burn victims, neonates, cancer patients, long-term steroid, bone marrow and solid organ transplant patients also tuberculosis, silicosis, diabetes patients are at increased of cutaneous aspergillosis because of decreased phagocytic activity [1, 4]. These fungal infections can be divided into cutaneous, subcutaneous, deep.

These fungal infections can affect tissues in two ways either as expansion of primary cutaneous aspergillosis and as secondary location of disseminated invasive aspergillosis of other organs or may be found in structural lesions [3, 4]. A Clinical presentation varies from local swelling, restricted range of motion, deep necrotic ulcers, gangrene due to invasion. The present case there was no respiratory symptoms or any systemic symptoms which indicates it was case of cutaneous aspergillosis.Diagnosis is based on microscopic morphology, histopathology and culture result. Because of newer diagnostic techniques identification of fungal infection has shown a rising trend while previously the cases were going undiagnosed [3,4]. Pathophysiology requires a destruction of both mechanical and immunologic barrier. As part of immunologic defense mechanism, macrophages destroys aspergillus conidia, and polymorphonuclear leucocytes and monocytes ruin Aspergillus hyphae through oxidate and nonoxidative process [4]. Because of invasion in to adjacent soft tissue or bone amputation may be required therefore early and definitive diagnosis for treatment and management of patient. Few cases of primary cutaneous aspergillosis have been reported most cases presented with immunodeficiency Since India is endemic for tuberculosis so the tb should be kept as differential and since the patient is a female then rheumatoid diseases also be kept in mind but since there was history of pain in pain in small joints or clinically there was no rheumatoid nodules or immunosuppressive drug intake rheumatoid disease was ruled [1, 6]. There was no evidence of cough, fever, evening rise of temperature, cervical lymphadenopathy so the possibility of tuberculosis was also very less.

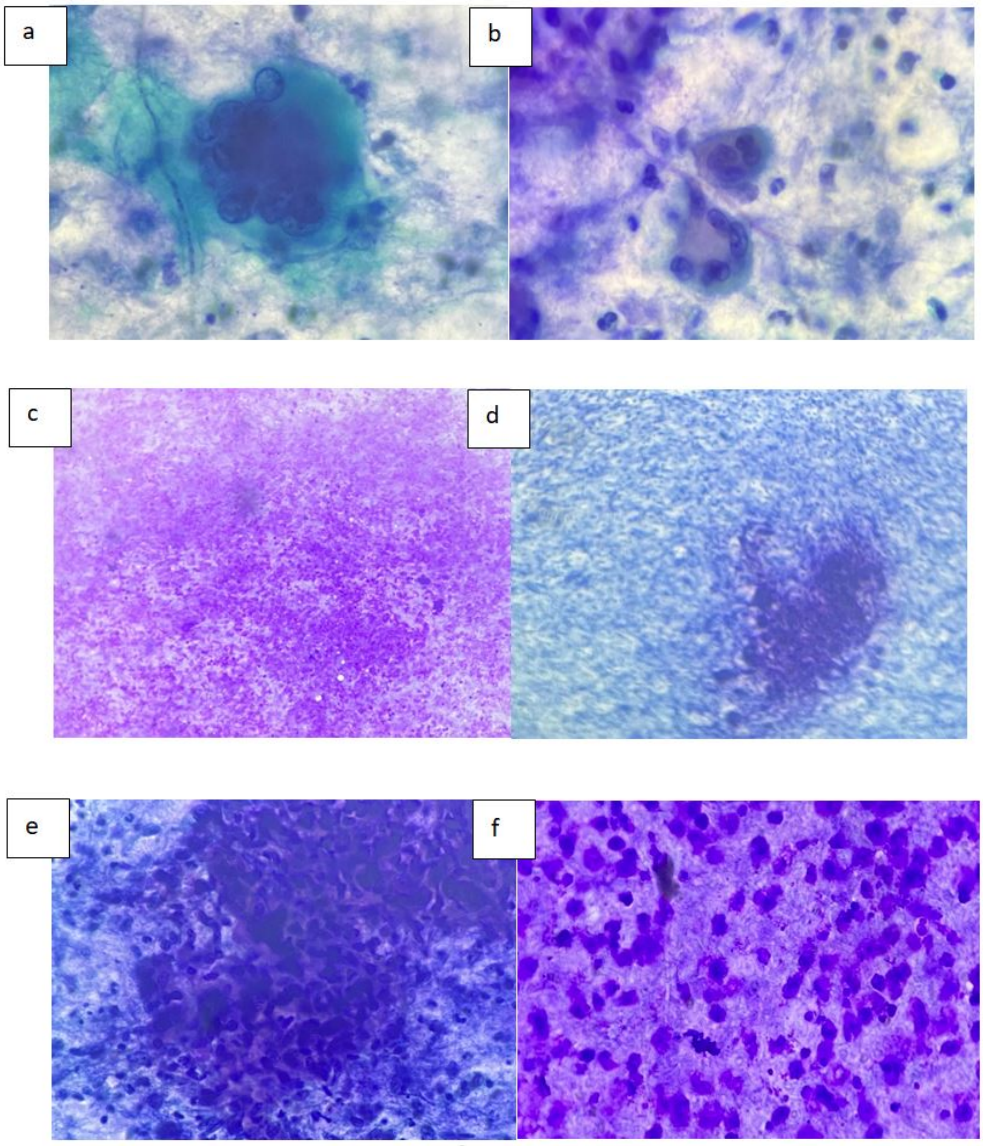

Figure 1: (a &b): 40x(pap stain):shows giant cells and fungal hyphal forms. (c): 10x (mgg stain): shows necrosis, (d) 10x (pap stain): epithelioid cells collections. (e) 40x (pap stain): granuloma formation, f 40x(mgg stain): fungal hyphal form

This case is a rare presentation of a multiloculated ganglion cyst clinically but when we see the histopathology in this case there is dense inflammation, necrosis, granuloma and fungal hyphae were noted which is reported very less in a patient who is immunocompetent with no clinical symptoms of tuberculosis in a country like India

Conclusion

In the end, we believe that integration of clinical history, radiology and histopathology is helpful in the diagnosis of cutaneous entities at rare sites like the present case. This integration helps to reports more number cases having a infectious etiology and adds on to the present data.

References

1. Avkan-Oğuz V, Çelik M, Satoglu IS, Ergon MC, Açan AE (2020) Primary Cutaneous Aspergillosis in Immunocompetent Adults: Three Cases and a Review of the Literature. Cureus, 12: e6600.

2. Sharma S, Yenigalla BM, Naidu SK, Pidakala P (2013) Primary cutaneous aspergillosis due to Aspergillus tamarii in an immunocompetent host. BMJ Case Rep, 2013:010128.

3. Tatara AM, Mikos AG, Kontoyiannis DP (2016) Factors affecting patient outcome in primary cutaneous aspergillosis. Medicine (Baltimore), 95: e3747.

4. van Burik JA, Colven R, Spach DH (1998) Cutaneous aspergillosis. J Clin Microbiol, 36: 3115-21.

5. Taskin E, Yavuz U, Akbaba D, Afacan MY, Ozsahin MK, Kaynak G, Seker A (2023) Aspergillus fumigatus Septic Arthritis of the Wrist: A Report of a Rare Case in an Immunocompromised Patient. Cureus, 15: e43622.

6. Kang Se Ri, Kang Hong Je, Juhng, Seon Kwan, Yu, Hyun Kyu et al. (2019) Primary Cutaneous Aspergillosis Presenting as a Multiloculated Cyst in the Hand, Iranian journal of radiology : a quarterly journal published by the Iranian Radiological Society, 16: 4.

Submit your next manuscript to Annex Publishers and benefit from:

- Easy online submission process
- Rapid peer review process
- Online article availability soon after acceptance for Publication
- Open access: articles available free online
- More accessibility of the articles to the readers/researchers within the field
- Better discount on subsequent article submission

Submit your manuscript at
http://www.annexpublishers.com/paper-submission.php