CASE REPORT

A Rare Yeast Causing Vulvovagninatis in Non-Diabetic Elderly Women

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Abstract:

The vault prolapse is important complication in patients following hysterectomy. In old age patients infection is one of the common complications after corrective mesh surgery done for vaginal vault prolapsed. In case of elderly patient advanced age result into weaken pelvic ligament is important factor behind such complications following surgery. Most of the time post operative infections are commonly due to bacterial etiological agents. But in immune-deficient patient mainly in those female who has underline chronic disease like diabetes or weaken immune-system due to advanced age, fungal vagnial infection may occur.

Here, we report a case of invasive vaginal candidiasis caused by Candida ciferrii in a elderly patient with operated for vagnial vault proplase by mesh repair surgery. She had vault prolapse following hysterectomy. Among mycotic vaginal infection major contributors are yeast species mainly Candida albicans. Non albicans candida species are infrequently isolated. Until now Candida ciferrii has not been known to cause vulvo- vaginitis particularly in our konkan region .Thus we added another emerging yeast species in a list of etiological agent causing vaginitis following vaginal vault repair surgery.

Key words – Candida ciferrii , vaginal vault prolapsed, vulvo- vaginitis in elderly

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Introduction:

Since many decades fungi were thought to be clinically less important but now in a present era of HIV/AIDS & Diabetic like chronic manageable illness, the incidence of fungal infections in humans has increased dramatically. The important risk factor which are responsible for rise in incidence of fungal infections mainly include different chronic diseases, use of immunosuppressive agents, newer modalities of treatment newer modalities of treatment & frequent use of invasive techniques in health care system. The yeast commonly Candida albicans & filamentous fungus like Aspergillus are responsible for most of the fungal infections which are frequently occur in humans.[1] Vulvovaginal infections commonly occurred in elderly female undergone surgical interventions for vaginal vault proplase. Among these infections like vulvovaginal candidiasis(VVC) is common one.

Candida species cause 20% to 25% of the cases of infectious vaginitis, second only to bacteria agents among them Candida albicans accounts for 80% to 95% of all cases.[2] Candida ceferrii is a newer strain of Candida & it was first discovered in 1965, it was named in honor of the memory of Prof. Dr. R. CIFERRI.[3].Candida ceferrii is rarely associated with human infection.[4] the infection due to Candida ceferrii is often superficial type rarely lead to systemic infection. The Candida ceferrii is found to cause human infection mainly during underline immunosuppressive illness.[5]

Case Report:

A 62year old woman, non diabetes, post hysterectomy vaginal vault prolapse stage 3 cystocele, and underwent transvaginal mesh repair surgery. 15 days postoperatively, she presented with vaginal discharge, pain abdomen, fever and malaise before coming to our hospital she was symptomatically treated by local physician for complains of vaginal discharge and lower abdomen pain started 4th day of surgery. She was hospitalized admitted in OBGY department, So patient was investigated for

Complete blood count, Random blood sugar level along with these base line investigation Pus (discharge) sample was send for Gram stain, potassium hydroxide (KOH)mount & culture.

Her temperature at presentation was 38 ℃ with a WBC count of 11 500/µL. Haemoglobin (Hb) 8.4 mg/dl, peripheral smear shows microcytic hypochromic RBC indicating iron deficiency anemia, C reactive protein markedly raised, Blood sugar level was fall within a normal range. In potassium hydroxide (KOH)mount plenty of budding yeast cells seen.(Image 2) Gram stain shows few pus cells with gram positive budding yeast cells. (Image 3) Sample was subjected to culture on Blood agar and Mac Conkey agar & on Sabrouds dextrose agar slant. Plates of BA & MacConkey were incubated at 37 ℃ over night.

Blood agar showed moderate growth non hemolytic small circular convex white colonies After overnight incubation and on Mac Conkey agar lactose fermenting pinpoint colonies are seen. While on the SDA growth of white pasty colonies observed. When these colonies subjected to gram stain gram positive budding yeast cells was observed (image2).The colonies with similar morphology picked and process in Vitek-2 for further identification & antifungal susceptibility as per standard operating procedure of yeast identification card and antifungal susceptibility card system. After 14-18 hours this growth was identified as Candida ciferrii by Vitek-2 system.

But antifungal susceptibility was not given as breakpoints of MIC(minimum inhibitory concentrations) of this species of Candida is not available in Vitek 2 data system for analysis as per SOP of Vitek 2. The identification was reported to treating physician and gynecologist patient empirically started on Flucanzole IV after 3-4 four days patients start recovering. The Patient was discharged after complete recovery. That is one of the reasons for not subjecting growth or second sample to broth micro dilution method for antifungal susceptibility.

Discussion:

Vaginal vault prolapse is a common complication following vaginal hysterectomy.[6]A descent of the vaginal cuff below a point that is 2 cm less than the total vaginal length above the plane of the hymen in this he upper vagina bulges into or outside the vagina. Infection is seen in elderly female, who underwent vaginal vault prolapse surgery by transvaginal mesh repair method. The incidence of mesh-related infections is ranged from 0 to 8% as per different

studies.[7] Genital fungal infections are often seen in patients with poorly controlled diabetes . The vulvo-vaginal infections in females are common among patients with poorly controlled diabetes.[8]

Candida species are present as the part of normal flora mainly in oral cavity, skin & female genital tract. But they normally not act as pathogen but when the balance of a microbial community is disrupted, Candida species can flourish and cause disease. Different invasive procedures which are done as part of treatment result into such disruption of normal flora. There are greater than 20 species of Candida which have been shown to cause disease in humans .

Non-albicans Candida species have been increasingly found as causative agents in human infections.[9].Non-albicans Candida species like C. glabrata, C. parapsilosis and C. tropicalis responsible for 5-20% cases of symptomatic fungal vulvovaginitis.[10] But among the non-albican Candida species association Candida ciferrii & vulvo-vagninatis is rarely documented particularly in Konkan region of Maharashtra. Till date most of the isolates of C. ciferrii are from cases of malignant otitis externa and onychomycosis.[11] The patient profile of the case & progressively worsening of her conditions after infection with C. ciferrii suggest that we should not neglect the isolation of unusual Candida species.

Fig 1- KOH mount of discharge.

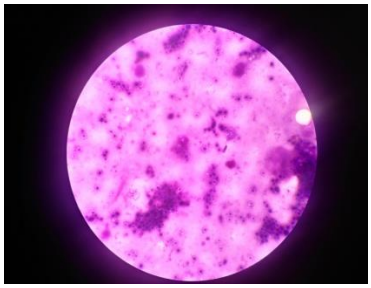

Fig 2- Gram positive budding yeast cells.

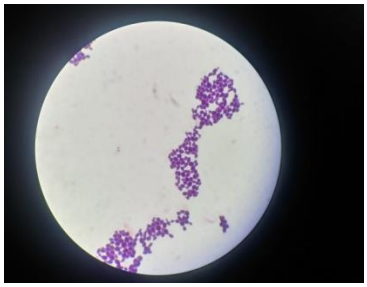

Fig 3- Gram Stain from colon showing gram positive budding yeast cells.

Conclusion:

It is important consider unusual pathogens as the probable cause of infection, especially in elderly women who underwent invasive surgical procedure, instead of treating empirically one should send samples before treating with broad spectrum antibiotics to avoid increasing trend of resistance in antimicrobial agents. Antifungal agents also need to start after proper antifungal susceptibility testing over isolated etiological agent to avoid drug resistance in antifungal agents. Early diagnosis and proper treatment help to improve quality of life& reduce stress in patients of vaginal infections.

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