

Case Report

Cervical aspergillosis in a post-menopausal female: a case report

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Received: 17 April 2018

Accepted: 27 May 2018

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ABSTRACT

Fungal infections are commonly encountered in the female genital tract on routine cervical smear examination, the most common being candida. Cervico-vaginal aspergillosis infection is rarely reported. We report a case of aspergillus infection in an immunocompetent 55-year-old post-menopausal female who presented with white discharge per vaginam. Initially the cervical pap smears showed only inflammatory changes. On per speculum examination the cervix appeared congested and ulcerated. Cervical biopsy was performed which showed sheets and balls of aspergillus fungus with areas of necrosis. PAS staining further confirmed the diagnosis. Serological tests performed were negative. Patient was started on antifungal and repeat biopsy from cervix did not show any fungal hyphae.

Keywords: Aspergillus, Cervix, Immunocompetent

INTRODUCTION

Aspergillus received its name from Micheli in 1729. Pier Antonio Micheli was a famous botanist as well as a Catholic Priest. His *Nova plantarum Genera* of 1729 was a milestone in the study of fungi. On viewing the spore-bearing structure of the fungus under the microscope, Micheli was reminded of a device called aspergillum used by the Roman catholic clergy to sprinkle holy water during a part of the liturgy called the asperges.¹

Infections of the genitourinary tract are a common problem. The respiratory system, is the most common site of infection with aspergilloma, as seen in opportunistic infections in immunocompromised patients. Disseminated disease always results from a primary pulmonary infection, but it can also occur from skin inoculation. Any site can be involved as a result of hematogenous dissemination, including the central nervous system, heart (abscesses or pericarditis), gastrointestinal tract, kidney, liver (resembling hepatosplenic candidiasis), thyroid, or spleen.²⁻⁴ Fungal infections are known to occur in immunocompromised

host. In the female genital tract candida is the most commonly detected fungus. Aspergillus causes nosocomial as well as acquired infection in the human beings. Most commonly affected sites by aspergillus are lungs, soft tissue and skin.^{5,6}

Contamination should be ruled out in all the cases of Aspergillus in cervicovaginal Papanicolaou smear. Treatment should be done to prevent serious consequences in the patients if pelvic surgery is done and in a potential situation when patient develops an immunocompromised state in future.

CASE REPORT

We report a case of 55-year-old female who presented with post-menopausal white discharge per vaginam and pain in lower abdomen. Patient was apparently alright 2 months back. In last 2 months patients developed profuse white discharge per vaginam. There was no associated per vaginam bleeding, no abdominal pain and no other significant complaints. Patient was non-diabetic and all the serological tests (HIV, HBsAg, HCV) were

negative. HbA1c was in normal limits with normal fast and post prandial blood glucose levels. Ultrasonography showed a bulky uterus on per speculum examination cervix was congested and showed an ulcerated nodule of 1cm. Clinical suspicion of cervical polyp was made with pelvic inflammatory disease. Cervical pap smears revealed only non-specific chronic inflammation. A cervical biopsy was conducted. Grossly we receive a grey white soft mass measuring 1cm, which was completely submitted for processing. Microscopic examination revealed endocervical glands along with sheets of aspergillus fungal hyphae which were branching at acute angles along with areas of necrosis (Figure 1).

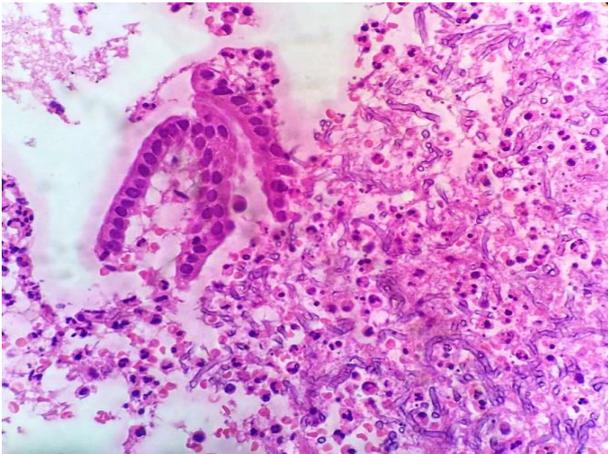


Figure 1: Fungal hyphae with endocervical glands, H and E stain (20X).

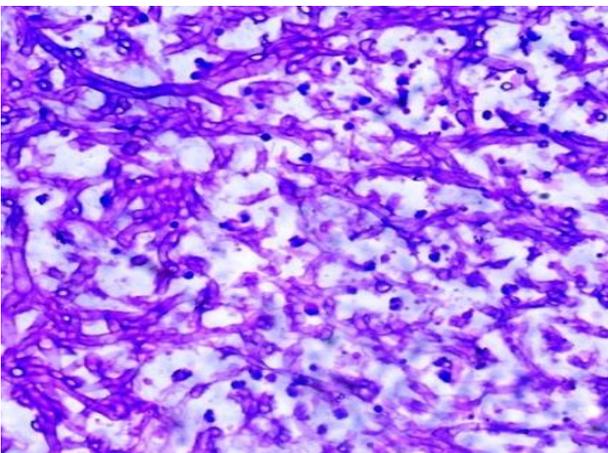


Figure 2: Fungal hyphae stained with pas stain (40X).

The endocervical glands appears histologically normal. No ectocervical lining was included in the biopsy. Special stains for fungus was conducted. Pas staining further confirmed the diagnosis (Figure 2). The patient was treated with anti-fungal and antibiotic treatment. Repeat blood glucose levels were monitored. Cervical biopsy was repeated post treatment completion from the surrounding ulcerated area and no fungal hyphae were found. Over next 3 months patient was followed up with

cervical pap smears. A repeat papanicolaou smear after two weeks was negative for intraepithelial organisms.

DISCUSSION

Female genitourinary tract infection is a common problem in developing countries. There is a wide spectrum of causative agents. A study by Sullam et al, showed 52.8% prevalence of fungal infection with majority being *Candida albicans* (28%), followed by *Trichomonas vaginalis* (8.7%), *Aspergillus species* (7.4%), *Streptococci* (4.6%) and *Chlamydia trachomatis* (4.2%).⁵ Other opportunistic fungal infections of female genital tract include *Blastomyces dermatitidis*, *Coccidioides immitis*, *Aspergillus flavus*, *Cryptococcus neoformans* and *Mucor*, with very few cases of *Aspergillus species*.² The *Aspergillus* genus of molds was probably first described by Micheli in 1729.¹ The name is thought to come from the similarity between fruiting heads of this particular fungus and the brush or aspergillum, used for sprinkling of holy water.

Aspergillus is a ubiquitous mold that causes allergies in otherwise healthy individuals and serious sinusitis, pneumonia and invasive diseases in a immunocompromised individuals. *Aspergillus fumigatus* is the species most frequently isolated from patients with invasive or disseminated infections.⁷ *Aspergillus species* are transmitted by air borne conidia and the lung is the major portal of entry. *Aspergillus* forms fruiting bodies and septate filaments 5-10µm thick, branching at acute angles (40 degree). It has a tendency to invade blood vessels therefore areas of hemorrhage and infarction are usually superimposed on the necrotizing, inflammatory tissue reaction. Almost any site can be involved due to hematogenous spread including central nervous system, gastrointestinal tract, liver etc.²⁻⁴

CONCLUSION

In the present case we highlight the unusual site of infection by *Aspergillus species* in an immunocompetent female. It was an incidental finding on cervical biopsy. The aim of this case report is to consider the other unusual sites of aspergillus infection and also to consider that aspergillus can invade into immunocompetent individuals.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

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Cite this article as: Natekar A, Basu S, Mondal G, Pujari M. Cervical aspergillosis in a post-menopausal female: a case report. *Int J Res Med Sci* 2018;6:2853-5.