

**Case Report:**

## **Concomitant Candida and Aspergillous infection in a post-menopausal woman: Diagnosed on PAP smear.**

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**Abstract:**

Cervical infections are commonly encountered problems particularly in postmenopausal women. Generally they present with pruritus, curdy white discharge associated with foul smelling. PAP smear technique is extremely useful for diagnosis of fungal infections like Candida, Aspergillous, as well as parasitic infestations like trichomonas. Based on PAP smear findings necessary steps should be taken for prompt management. Concomitant candida and aspergillous infection is extremely rare in women. We report here with an unusual case in which both candida and aspergillous are diagnosed in a pap smear of post-menopausal woman

Keywords: Aspergillous, Candida, PAP smear

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**Introduction:**

Cervical infections are commonly encountered problems particularly in postmenopausal women. Generally they present with pruritus, curdy white discharge associated with foul smelling. Pap smear technique introduced by Dr. George Papanicolau in 1928 is a screening test particularly useful for detection of abnormal cells in PAP smears, is also useful for detection of various genital infections in women. Concomitant candida and aspergillous infection is extremely rare in women.

We reported here with an unusual case in which both candida and aspergillous are diagnosed in a pap smear of post-menopausal woman.

**Case report:**

A 55 year old female presented with pruritis, foul smelling whitish discharge to the gynecology OPD of our hospital. There was no history of bleeding per

vagina, weight loss or other local symptoms. Colposcopy was done which revealed unhealthy cervix without any growth or abnormality. Routine tests like C.B.C, urine examination were within normal limits. PAP smear was done and two slides were sent to cytopathology department of our hospital.

**Microscopic examination:**

Smears studied revealed pseudo-hyphae and budding yeast of candida admixed polymorphonuclear exudate. Also noted fungal hyphae and fruiting head of aspergillous species. Background epithelial cells were negative for intraepithelial malignancy. The patient was offered treatment of pelvic inflammatory disease. (Fig. 1, 2, 3)

**Discussion:**

Infections of the genitourinary tract is a common problem, unhygienic conditions are the major risk

factors<sup>1</sup>. Systemic diseases like diabetes mellitus are major predisposing factors<sup>1</sup>. Sulhamet et al. reported prevalence of 52.8% with a spectrum consisting of candida albicans (28.0%), Trichomonasvaginalis (8.7%), Aspergillous species (7.4%), streptococcus (4.6%) and chlamydia trachomatis (4.2%)<sup>2</sup>.

The cervico-vaginal PAP smear is considered an important tool in diagnosing neoplastic lesions in genital tract<sup>3</sup>. It is also of use in detecting fungal infections especially candida which shows spores in association with pseudo-hyphae and budding phenomenon<sup>3</sup>. However recognition of aspergillous species requires the presence of characteristic fruiting body with acute angle branching hyphae and spores<sup>4</sup>. In our case, hyphae forms of aspergillous and budding yeasts of candida present in the same plane with cervical cells, so possibility of contamination by spatula is ruled out<sup>6</sup>.

Candida is a diploid fungus that grows both as yeast and filamentous cells and a causal agent of

opportunistic oral and genital infections in humans<sup>4</sup>. Genital candidiasis causes curdy white discharge most commonly. Seasonal variation of occurrence of candidiasis was reported by Sodhani et al<sup>5</sup>.

Infection with aspergillous species most commonly transmitted by airborne conidia and the lung is the major site of infection. Disseminated disease almost always results from a primary pulmonary infection but it can also occur from skin inoculation<sup>4</sup> The identification of aspergillous and candida species in PAP smears should prompt the clinician for further investigation to look for systemic focus.

Once the factors for the contamination are excluded then cervico-vaginal PAP smear finding of aspergillous and candida species facilitates an early diagnosis and prompt treatment. This case further concludes the rarity of concomitant infection by both candida and aspergillous which was diagnosed on PAP smear.

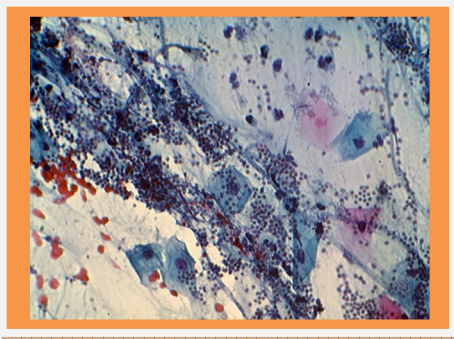


Fig. 1 – PAP smear showing yeast forms of candida

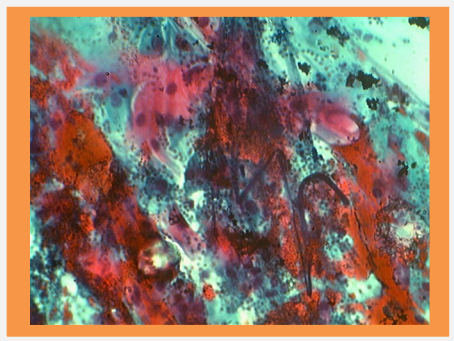


Fig. 2 – PAP smear showing acute angled hyphae (aspergillous) mixed with yeast forms of candida

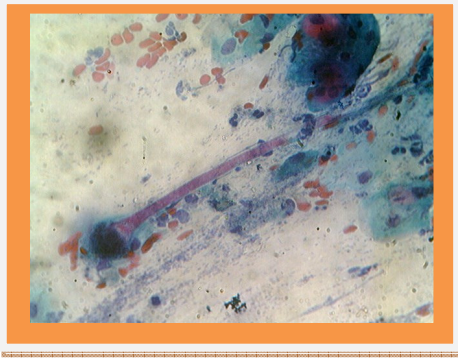


Fig.3 – PAP smear showing fruiting body (arrow) of aspergillous.

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