

CYTOLOGICAL INVESTIGATION ON TRICHOSPORON SP. IN THE URINE CYTOLOGICAL SPECIMEN

*Muraishi Y, Taguchi K, Fujita M, Iwahara M, Oharaseki T, Wakayama M, Takahashi K, Shibuya K, Naoe S
Department of Pathology, Toho University Ohashi Hospital, Tokyo 153-8515, Japan

Objective: Candida and Trichosporon have been known as commonly observed pathogenic fungi in urine cytological specimens in routine laboratory examination. However, discrimination between Candida and Trichosporon is not facilitating only by the routine cytological examination. The present paper aimed to elucidate cytological characteristics of Trichosporon sp. in urine cytological specimens with a focusing on an identification from Candida sp.

Study design: Four of cytological specimens from urine cytology including Trichosporon sp. and two each of three different species of Candida sp. were employed for the study of which diagnosis was confirmed by culture. Preparations from these urine cytological specimens were stained with Papanicolaou's, Giemsa's, and PAS reaction, and examined under light microscopy to gain insight to characteristics and staining for Trichosporon sp in the specimen.

Results: No significant difference was found in staining for both Giemsa's and Papanicolaou's stained preparations between Trichosporon sp. and Candida sp. However, whereas staining of Candida sp. for PAS reaction was strong and uniform, those of Trichosporon sp. varied in cell to cell. Three different forms of Trichosporon sp.; yeast, pseudohypha, and hyphae, were clearly and ordinarily observed in all specimens examined. Yeast form of Trichosporon showed prominent pleomorphism compared to that of Candida sp. The major and minor axes of Trichosporon and Candida measured 6.9 ± 2.4 m m, 2.9 ± 0.9 m m, 4.8 ± 2.4 m m, and 3.4 ± 0.6 m m, in length, respectively. Hypha of Trichosporon showed mostly the same thickness as that of the minor axis of the yeast form, and two to four points of bifurcation were usually demonstrated. There were few blastoconidia, but occasional arthroconidia, as well.

Conclusion: Differences in morphology in urine cytology specimens for Trichosporon sp. and Candida sp. should be emphasized with an everlasting evidence of pseudohypha, hypha, blastoconidia, and arthroconidia.