INTRODUCTION

Candidosis is a relatively common mycoses of worldwide distribution. It occurs at both sexes of all ages. The fungal disease has been also found in many kinds of wild animals and pets (Beneke, 1971).

Candidosis (Moniliasis, Candidiasis) caused by Candida species, usually C. albicans is an acute, subacute or chronic infection. The fungus may produce lesion either on skin, in the mouth, vagina, nail, bronchus and lung or sometimes causing septicemia, endocarditis and meningitis (Emmons, 1970).

There are certain predisposing factors that favor the development of disease such as, malnutrition, diabetes, pregnancy, antibiotic therapy, immunosuppressive drugs, corticosteroids and debilitating disease.

Candida particularly C. albicans can be isolated from alimentary tract and the mucocutaneous region of normal man and animals. It is regularly present in small numbers in the mouth of normal healthy adults.

The average 4% of incident oral candidosis in newborn appears to be contributed by candidal vaginitis of the mother during pregnancy. The incidence of vaginal candidosis in the normal nonpregnant woman is approximately 5% (Rippon, 1974). In nonpregnant woman with vaginal discharge

about 18% was reported candidosis by C. albicans and at an average rate of 30% for gravid woman. Mahgoub (1968) reported that the incidence of vaginitis by C. albicans was 15.76% among Sudanese nonpregnant woman and 44% in pregnant woman.

Kapica (1968) found 82% incident case of candidosis in sputum of patients.

The superficial infection by C. albicans in Thai patients was 38% (Taylor, R.L. et. al., 1968), none of incident vaginitis and other areas of infection have been mentioned.

The fungus in the yeast form could be both saprobe and pathogen, so that the identification of it in laboratory is very important for further diagnosis and treatment. Specific identification is mainly based on chlamydospore formation (Kligman, 1950; and Sukroongreung, 1971), with the supporting method of germ tube in serum at 37°C (Taschdjian, 1960), sugar fermentation and probably sugar assimilation (Beneke, 1971).

Dabrowa (1970) studied electrophoretic analysis of water soluble proteins from budding and filament producing phases of C. albicans. He found that the variation of media and temperatures showed effects on the number of protein bands

of both phases. Further studied by Shechter had been done in 1972, he found that the protein patterns of seven Candida species showed a relatively significance of taxonomic character among Candida interspecies.

With the idea that C. albicans is able to grow on different kinds of media such as, Rice agar (Beneke, 1971), Corn meal agar (Benham, 1931) and it can grow also in vaginal discharge of pregnant woman which is rich in glycogen. These two evidences draw our attention to investigate amylase activity of this pathogenic fungus.

The purpose of this study was designed to determine the relationship of the protein pattern and amylase activity of intraspecies C. albicans to the ability of fungal infection in different localized lesions.

The experiment was a preliminary study of soluble protein patterns by disc electrophoresis of C. albicans strains, which were quite common in Bangkok, Thailand. The result may promote the understanding of the variation of protein patterns among the intraspecies of C. albicans.