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Embryonated egg as an alternative model for studying the virulence potential of Cryptococcus neoformans

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The use of embryonated egg as an alternative in the study of the pathogenesis of fungi is evolving, although murine models are "gold standard" however, these models are used to screen determinants of virulence among fungi species. This study was aimed at the study of the virulence potential of clinical (WM626) and environmental (EN028) isolate of *Cryptococcus neoformans* both belong to molecular types VNII in chick embryo infected via Chorio-allantioc membrane (CAM). At a concentration of 10^8 cfu per ml, the two strains had varying virulence potential on the embryo. Environmental strain EN028 achieved 100% mortality on day 5 of experiment whereas strain WM 626 did not cause 100% mortality. Histopathology of CAM from both strains revealed massive disruption of CAM cells in EN028 when compared to WM626. Also with decrease in the concentration of infectious does, infection without mortality was observed. Our study suggests that embryonated eggs is a useful alternative tool to pre-screen *Cryptococcus neoformans* strains to select strains for subsequent testing in murine models.

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Prevalence of tinea capitis and tinea corporis in Benghazi

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A cross sectional prospective study was carried out over a period of one year from (April 2008-March 2009), depending on prestructured questionnaire, study was carried out on a total of two hundred patients with different age, sex and with clinically suspected cases with tinea capitis and corporis. Specimens were obtained from skin scales of the lesion. Hair specimens were collected by plucking the hair with forceps. The aim of this study to identify the etiological agents involved in these infections. Out of 200 patients who presented with suspected superficial fungal and to determine prevalence of tinea capitis and tinea corporis in Benghazi population. Infected, 113 (56.5%) were male and 87 (43.5%) were female. Out of these, 117 children (65 male and 52 female) were provisionally diagnosed with tinea capitis and corporis. The youngest patient was a 5 months old infant, whereas the eldest patient a 71 year old man. Greater number of positive cases of dermatophytes is seen in children under the age of 15 year. Tinea capitis was predominant in 31 (57.4%) children, while tinea corporis were (14.8%) children. 125 (62.5%), were found to be positive by direct microscopic examination only, while 50 (25%) by culture only and 45 (22.5%) positive by both techniques. In addition 36 (18%) patients give positive family history of dermatophytosis, 9 patients of them were positive culture while 55 (27.5%) patients had history of contact with animals 16 of them were positive culture. Also17 (8.5%) were foreign patients, of these 8 were *soudanense*. In this study, the most common sites where dermatophytes in Tinea corporis isolated were the neck and back. Also we observed that, *T. violaceum* was the most common dermatophyte isolated 13 (24%) (mainly among children below 15 years of age). *T. soudanense* 9 (16%) was the second common isolated, followed by *T. schoenleinii* 8 (14.8%), other dermatophytes in descending order, were *M. canis* 5 (9.3%), *T. mentagrophytes* 4 (7.4%), *M. ferrugineum* 3 (5.5%), *T. rubrum* 3 (5.5%), *T. tonsurans* 2 (3.7%), *M. nanum* 2 (3.7%), *T. yaoundi* 1 (1.8%), *T. terrestre* 1 (1.8%), *T. verrucosum* 1 (1.8%), *M. audouinii* 1 (1.8%) and 1 (1.8%) were unidentified. Culture the isolates were a mixed of dermatophytes, in 2 cases of tinea capitis the culture revealed in mixed of *T. violaceum* and *T. mentagrophytes*, while 2 cases of tinea corporis; *T. tonsurans* and *T. schoenleinii* where the culture revealed a growth of *T. rubrum* and *M. nanum*. The infection was found to occur more frequently in males (29 cases than in females (25 cases). In the present study, grey patch was the predominant type of tinea capitis 32 (16%), black dot 2 (1%) and kerion 2 (1%) was the least common types.

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