

Case Report:

Ringworm Caused by *Trichophyton verrucosum* in Two Sudanese Desert Sheep

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ملخص البحث

يعتبر هذا التقصى السجل الأول في السودان لإصابة رأسين من الضأن بمرض القوب الحلقى. عزل المسبب وهو فطر الشعيرية المبرقة (*Trichophyton verrucosum*) حيث عزل لأول مرة في اثنين من الضأن في منطقة سوبا. أخذت كشطات جلدية من الحيوانات المصابة وأجريت الإختبارات المباشرة وتمت زراعة العينات وعزل الفطر كما أجريت الأختبارات التاكيدية.

Trichophyton verrucosum is a common cause of ringworm in cattle (Abdel karim *et al*, 1988b; Ming *et al*, 2006); it was also reported from camel (Abdalla, 2002) and has been documented in goats by Abdel Karim and Abdalla (1988a) and Peano *et al*, (2008), and in donkeys (Abdalla *et al*, 2005). It has also been reported from cases of *Tinea corporis*, *T. faciei* and *T. capitis* (Maslen, 2000) as well as *T. barbae* (Maeda *et al*, 2002) infection in humans. Power and Malone (1987) have documented an outbreak of ringworm in sheep in Ireland due to *T. verrucosum*. Anindita, *et al*. (2006) and Yahyaraeyat *et al*. (2009) found that *Trichopyton mentagrophyts* was the most prevalent dermatophyte in sheep and goats. Lyndsey (2008) considered the genus *Trichophyton* as the main cause of the disease in sheep. This occurs when the fungus invades the skin and hair (wool) follicles. Slick shearing, repetitive washing, and stress make animals more susceptible to infection. In the Sudan, there is no report on *T. verrucosum* infection in sheep.

Out of thirty six experimentally infected sheep, 9-month-old brought from El Gezira State to the Central Veterinary Research Laboratories Centre, two sheep (a male and a female) had circular lesions (2-3 cm in diameter) on the eye lids and the ears (Fig. 1). The lesions were cleaned and disinfected with 70% alcohol and deep skin scrapings were collected for direct microscopic examination and culture.

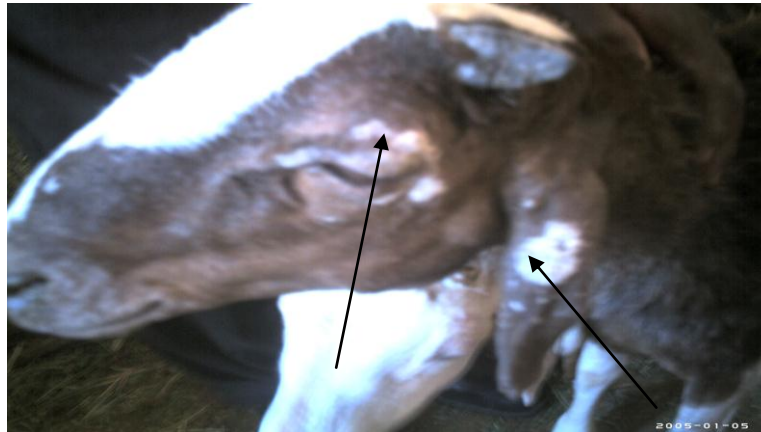


Fig 1: Ringworm lesions on the ear and the eyelid of a Sudanese desert sheep.(arrow).

Direct examination of the skin scrapings in 20% KOH mounts revealed ectothrix pattern of invasion of wool with arthrospores. Portions of the skin scraping were cultured onto Sabouraud's Dextrose Agar, containing 0.5% yeast extract powder, chloramphenicol (0.5mg/ml of culture medium) and actidione.

The cultures were incubated at 26°C and 37°C and colonies at 37°C appeared after 10 days. They were cream to slight brown, folded, waxy and of 8-9 mm in diameter.

Colonies incubated at 26°C appeared 21 days PI and they were 3-3.5 mm in diameter. Subcultures were made at 37°C on Brain Heart Infusion Agar with the addition of 0.5 % yeast extract. The colonies obtained were brown in colour, heaped, and folded, with smooth and waxy surface when incubated at 37°C for 8 days. Microscopically, clear segmented hyphae and chains of chlamydo spores were observed (Fig. 2). The cultures were negative for urease test.

Searching the available literature has revealed no report on sheep dermatophytosis due to *T. verrucosum* in the Sudan. The current study has documented for the first time isolation of *T. verrucosum* from lesions in two sheep in Sudan field. This finding is in accordance with Power and Malone (1987). On the other hand, Ali-Shtayeh *et al* (1989) isolated *T. verrucosum*, *T. mentagrophytes*, *Microsporum nanum* and *Microsporum canis* from sheep dermatophytosis.

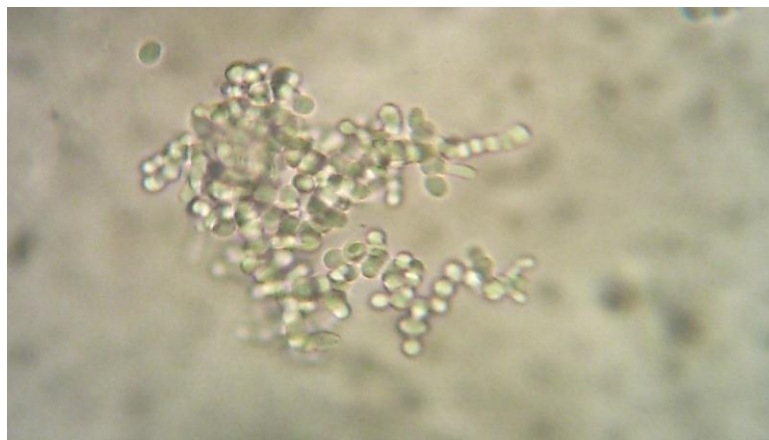


Fig 2: Lactophenol cotton blue mount: Note chains of chlamydo spores of *T. verrucosum* culture incubated at 37°C.

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