CURVILARIA DERMATOMYCOSIS IN A JERSEY HEIFER: A CASE REPORT

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ABSTRACT

A 2 year old Jersey heifer was presented to Veterinary Clinics, Faculty of Veterinary Sciences and Animal Husbandry, Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Srinagar, with history of cutaneous dermatomycosis. Mycological screening of skin scrapings led to isolation and identification of Curvilaria spp. Mycological screening of skin scrapings led to isolation and identification of Curvilaria spp.

Key words: Curvilaria, Dermatomycosis, Jersey heifer.

INTRODUCTION

Curvilaria species, one of the important members of family Dematiaeaceae (brown pigmented fungi), are a large and heterogeneous group of moulds causing a wide range of diseases including phaeophyphomycosis, chromoblastomycosis and eumycotic mycetomas. The organisms are widespread in environment and are found in soil and plant debris. The infection is usually introduced by an abrading or penetrating injury. Curvilaria species are relatively common pathogens of animals and humans (Thomas et al., 1988), in both cases causing chronic non specific allergic sinusitis and traumatic skin infections (Sivanesan, 1987). The Present communication describes a case of dermatomycosis caused by Curvilaria species for the first time in Kashmir.

MATERIALS AND METHODS

A two year old crossbred Jersey heifer was presented to Department of Veterinary Clinics, Faculty of Veterinary Sciences and Animal Husbandry, Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Srinagar, with history of swollen paranasal sinuses and patchy, scaly cutaneous eruptions on nose, jaw, brisket and flank regions. The animal had not responded to routine antibiotic therapy for more than a week. The skin and hair scrapings were removed after disinfecting the skin with 70% alcohol. The isolation and identification of the fungus from the skin scrapings was performed following the methods described by Lagneau et al. (1998). Wet mounts of the skin scrapings were prepared in 20% potassium hydroxide and examined. The specimen was inoculated onto Sabraouds Dextrose agar. Mycological study was done by subculturing on slopes and plates of SDA without antibiotics and incubation at 27-28°C for 10 days and 37°C for 1 week. Fungal colonies of the culture were examined for colony morphology and microscopically using Lactophenol cotton blue staining. The presence of conidia and other structures was recorded. Antifungal susceptibility testing was done using Clotrimazole (10 mcg), Nystatin (100 units), Ketoconizole (10 mcg) and Amphotericin (100 units) discs.

RESULTS AND DISCUSSION

Grossly, dark brown to black hairy expanded colonies on Sabraouds dextrose agar were observed. Microscopically, erect conidiophores, unbranched, flexuose in apical part with smooth walled conidia (21-31 x 8.5-12 μm), three septate, ovalaceous to ellipsoidal, with subterminal cell swollen and distinctly larger than remaining cells were observed. The microscopic characteristics typical of Curvilaria species were observed (Plates 1 and 2).

Plate 1: Culture smear of Curvilaria species (Lactophenol cotton blue, X 40).
Test revealed sensitivity to Clotrimazole, Ketoconizole and resistance to Amphotericin and Nystatin. Animal recovered completely after treatment with Clotrimazole therapy (1% cream topically) for 10 days. Curvilaria spp. have been associated with allergic sinusitis infections in cattle popularly known as Helminthosporiosis in older literature (Bartynski et al., 1990). Infection with the Curvilaria spp. have caused skin infections (Gugnani et al., 1990), subcutaneous tumefactions/mycetomas in horses (Boomker et al., 1977), osteomyelitis in dogs (Coyle et al., 1984) and central nervous infection in parrots (Clark et al., 1986). The fungus is occasionally associated with allergic sinusitis (Bartynski et al., 1990), keratitis and cutaneous infections such as phaeohyphomycosis (Grieshop et al., 1993), onychomycosis (Barde and Singh, 1983) or mycetomas.

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REFERENCES


