Curvularia dermatomycosis in a goat: Tamil Nadu, India

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Abstract
A 2 year old female non-descript goat was presented with the history of skin infections such as reddening, crusty and darkened areas. Samples were randomly collected from affected areas aseptically for microbiological examination. Macroscopic and Microscopic examination of colony on sabouraud’s dextrose agar revealed cottony and dark brown coloured colony. The reverse is brown to brownish-black in colour. Microscopic examination of colonies by lactophenol cotton blue staining revealed the presence of septate hyphae with short conidiophores and multicellular, curved conidia. The appearance of surface colonies on sabouraud’s dextrose agar as well as in lactophenol cotton blue staining identified the organism as Curvularia species. The Curvularia species are commonly found on variety of plants. The present communication reports the Curvularia sp. skin infections in goat in the Cauvery delta region of Tamil Nadu, India.

Keywords: Curvularia species, skin infection, small ruminants, Cauvery Delta region, Tamil Nadu

1. Introduction
Curvularia species are ubiquitous dematiaceous fungi, belongs to class eumycetes and family Pleosporaceae. It is widely distributed in the environment and commonly found in soil and vegetation in the tropical and temperate countries [1]. It is commonly associated with disease in plants [2]. There were reports on infections in humans and animals due to some species of Curvularia based on route of infection and immune status of the host [3]. The most frequently isolated Curvularia species from clinical samples are C. australiensis, C. geniculata, C. hawaiiensis, C. lunata and C. spicifera [4]. Sivanesan 1987 [5] has reported that Curvularia species produce sympodial conidiophores with terminal and intercalary conidigenous cells. The Conidia are elongated, transversely septate and curved conidia with asymmetrically swollen intermediate cell, however straight conidia producing species also reported. The present paper describes the report of Curvularia dermatomycosis in a goat in the Cauvery delta region of Tamil Nadu, India.

2. Materials and Methods
A 2 years old female non-descriptive goat was presented to Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Orathanadu, Thanjavur district with the history of skin infection and loss of hair in the face. Pruritus, erythema, alopecia and crusts were noticed in the face region on clinical examination. Samples were collected in a sterile container for mycological analysis. The samples were inoculated into Sabouraud’s dextrose agar and incubated aerobically at 30 °C for 24 hours. Fungal colonies were observed on inoculated culture plate. Macroscopically, colony growths such as colony texture, color, reverse color and microscopic characters such as color, shape, number of septa and arrangement of conidia were identified. The isolation and identification of fungus was performed by following the guidelines of Al-Doory, 1980 [6].

3. Results
Colonies on Sabouraud’s dextrose agar were cottony, grayish in color initially which became dark brown color later on. The reverse side of the culture plate revealed brown to brownish-black colored colonies. Microscopic examination of colonies by lacto phenol cotton blue staining revealed the presence of septate hyphae with short conidiophores and four celled, ovoid brown colored conidia with subterminal cell enlarged and distinctly larger than
remaining cells were observed. The appearance of surface colonies on sabouraud’s dextrose agar as well as in lactophenol cotton blue staining identified the organism as Curvularia species.

4. Discussion

The macroscopic and microscopic characters were similar to the report of Curvularia species shown in the Figure 1, 2 and 3 [7-9]. Curvularia species is a common fungus that grows on a wide range of decaying plant material, prevalent in warm and humid areas. The fungus is widely distributed and has been the cause of several infections in human and animals. The main route of infection usually occurs through inhalation and skin inoculation [10]. The curvularia species have been linked with many infections in humans such as sinusitis, keratitis, peritonitis, onychomycosis, endocarditis, endophthalmitis, cerebral phaeohyphomycosis [11-14]. Chhabra et al., 2004 reported that Curvularia species is a cause of subclinical mastitis in a goat. This species have also been reported to be associated with canine fungal keratitis [15], bovine dermatomycosis [16] and bovine mycotic mastitis [17]. To the best of our knowledge, this is the first report of Curvularia spp. from skin infections in goat flocks of Cauvery delta region of Tamil Nadu.

5. Conclusion

The present communication describes the identification of Curvularia Species from skin infections in goat. It is concluded that screening of large number of samples suspected of having dermatomycoses in animals and prevalence of this species could help in the development of therapeutic strategies in future.

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7. References


