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## Treatment of fungal infection in rhesus monkey: A case study

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### Abstract

*Candida* spp. is a dimorphic fungi and opportunistic pathogen. It is responsible for skin lesion mostly in fingers tips and genital areas. Lactobacillus bacteria keep the level of *Candida* spp. in the genital area under control in most cases. Candida can overgrow and produce an illness if Lactobacillus levels are altered in some way. A case presented to Veterinary Clinical Complex, Bhubaneswar with signs of intense itching at the perineal region and hand, superficial lesions on fingers and perineal region in a monkey by microscopic examination the causal agent was found as *Candida* spp. Fluconazole @ 5mg/kg B. wt. was given as treatment.

**Keywords:** Fungal infection, rhesus monkey, *Candida*

### Introduction

Veterinary dermatologists in general do not have extensive experience of nonhuman primate (NHP) dermatoses (Bernstein and Didier, 2009) [1]. *Candida* spp. is a common opportunistic pathogen that usually affects the elderly and immune-compromised animals (Wikse *et al.*, 1970) [3]. *Candida* spp. are prevalent saprophytes of the epidermis, gastrointestinal tract, and reproductive tract in nonhuman primates with impaired immune systems, and they behave as facultative pathogens in these animals. The fungus can cause ulcers or white, elevated plaques on the tongue or mouth, and it can even affect the fingernails. A rhesus monkey was found to have a superficial infection of the mucous membranes and skin, as well as paronychia and preputial inflammation. It's crucial to tell the difference between oral lesions produced by trauma, monkeypox, and herpesvirus infections. A nystatin-containing topical cream can help treating the superficial infections. For candidiasis of the GI tract, oral nystatin (200,000 U, four times daily, for 48 hours following clinical recovery) is helpful.

### Case History

A rhesus monkey was presented to the Teaching Veterinary Clinical Complex, Bhubaneswar with the signs of intense itching and irritation in the perineal region and hand, superficial lesions on palm (Fig. 1), fingernails (Fig. 2) and perineal region (Fig. 3), showing scales and hardening of skin. Further, the lesions were granulomatous in nature, which are in line with the reports given by Migaki *et al.* (1982) [2] in the alimentary tract of nonhuman primates.

### Diagnosis and Treatment

Scrapping of infected the material was done from the corner edge and center of the lesion, where active development and multiplication of the fungi occurred, with a sterilized wire loop, needle, or swab, using aseptic procedures. SDA medium was used to culture the cells, and they were viewed under a low-power microscope. Treatment done by Fluconazole @5mg/kg for 15 days and found it successful (Fig. 4).

### Conclusion

Very few cases of fungal dermatitis in rhesus monkey are reported in India. This case was brought to TVCC, CVSc. & A.H., OUAT, Bhubaneswar, which was diagnosed as fungal infection of skin of palm and perineum and was subsequently treated with fluconazole for 15 days. The animal cured and recovered successfully.



**Fig 1:** Skin lesion on the palm of a rhesus monkey affected by *Candida spp.*



**Fig 2:** Skin lesions on the fingernails of a rhesus monkey affected by *Candida spp.*



**Fig 3:** Skin lesions on the perineal region of a rhesus monkey affected by *Candida spp.*



**Fig 4:** Healed skin after treatment *Candida spp.* Infection in a rhesus monkey

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