

View from Beneath: Pathology in Focus Rhinosporidiosis

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Abstract

Rhinosporidiosis is the disease resulting from infection by *Rhinosporidium seeberi*, an organism endemic in the Indian sub-continent, but rarely seen in the United Kingdom.

We describe the clinico-pathological features of a case presenting in a 14-year-old female.

Case report

We present the case of a 14-year-old girl, who arrived in this country ten months ago from Bangladesh.

She presented with a four month history of blood-stained watery discharge from the left nostril, and one month of difficulty in clearing her nose. She was seen by her general practitioner, and referred to ENT Outpatients, where the left nostril was completely obstructed by a polypoid lesion.

On admission, she was afebrile and normotensive with a haemoglobin of 12.1 gdl; white cell count 6.0×10^9 /dl.

The nasal cavity was filled by a friable, polypoid lesion, the origin of which was unclear. It was removed piecemeal and submitted for histological examination.

The microscopic appearances were characteristic with mucosal hyperplasia and polyp formation. Occasional ulcerated areas were present. The polyps had a fibromyxomatous stroma in

which round chitinous structures were seen, containing spor-like bodies at various stages of development. The walls were birefringent under crossed polarized filters. In the submucosa there was a granulomatous host response consisting mainly of histiocytes with some neutrophils and lymphocytes. Only occasional eosinophils and giant cells were present.

These appearances are those resulting from infection by *Rhinosporidium seeberi* (Fig. 1).

Discussion

Rhinosporidiosis characteristically affects the nasal (70 per cent) and conjunctival (15 per cent) mucosae, although other sites including urethra vagina, anus or skin may also be affected.

The nature of the causative organism has been the subject of much debate. Initially it was considered to be protozoan, but demonstrable production of chlorophyll suggested it was more likely to be a pathogenic algae, and the chitinous wall further strengthened this concept. However, the absence of plastids and protoplastids, important algal components, was contrary to this argument. Recently, Thianprasit and Thagerngpol (1989) have stated that *R. seeberi* should be considered a fungus whose exact taxonomy is uncertain.

Until recently, attempts at culturing the organism were unsuccessful, but in 1989, a group at Trivandrum Medical College reported some success (Krishnamoorthy *et al.* 1989).

The organism is thought to be contracted from infected soil and water, probably as a result of contaminated drinking water.

The recommended first line of treatment remains surgical excision with cautery, and although some response to fungicides has been claimed in two cases observed in Gabon (Debie *et al.* 1990), it is generally considered to be insensitive to systemic anti-mycotics.

Conclusion

Although rhinosporidiosis is rarely seen in this country, it should be considered in cases of unexplained nasal or conjunctival lesions in patients from the Indian sub-continent.

References

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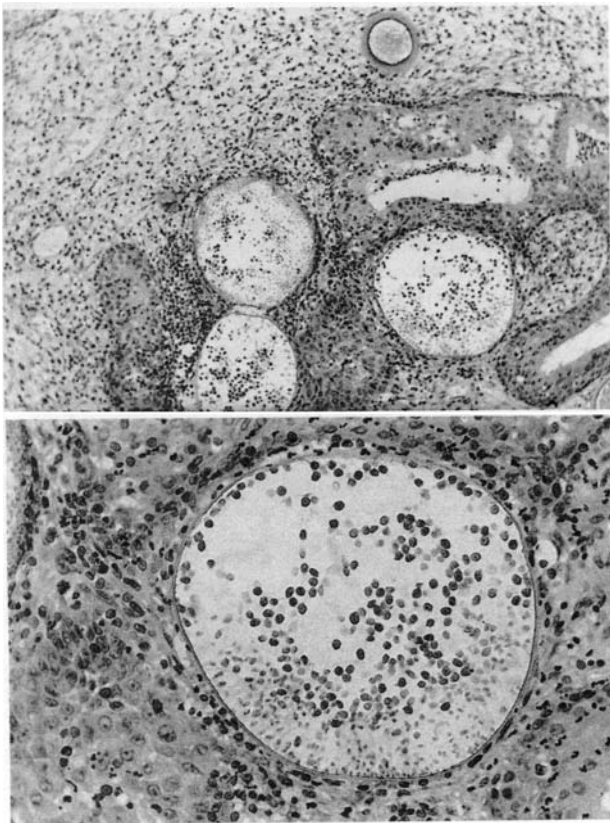


FIG 1

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