This report deals with the isolation of Cylindrocarpon tonkinense Bugnicourt from the cornea of a 55-year-old female. Cylindrocarpon infection in humans is rare with only one case described in the literature (Laverde, Moncada, Restrepo & Vera, 1973). In this instance the disease probably resulted from a splash of muddy water. Microscopic examination of the corneal specimen revealed septate mycelial elements. The fungus was identified as C. tonkinense on a morphological basis.

The specimen was received in the laboratory in a sterile container. Sterile cotton swabs were used to obtain a specimen for culture. The latter was taken from marginal areas of the corneal ulcer and inoculated into Sabouraud’s dextrose agar plates with or without chloramphenicol and cyclohexamide. Smears and direct potassium hydroxide mount of the additional material revealed septate branching filaments approximately 2·5 μm diam.

The patient stated that at approximately the end of Oct. 1976, muddy water had got into her left eye while farming. She had experienced no immediate pain or discomfort, but did so 2 weeks later. When the eye was examined on 15 Nov. 1976, a small ulcer was detected. The eye was treated with general and topical application of antibiotics. This treatment was ineffective, so on 19 Nov. 1976, she was referred to Kyushu University Hospital for further consultation and treatment.

Clinically blepharospasm, slight edema and redness of the superior palpebral area were noted. A centrally-located, round ulcer was noticed in the cornea. It was 6 mm diam and a hypopyon of 50%. Perception and projection were positive. Some cloudiness of the cornea was present. At this time, scrapings from the cornea revealed abundant septate mycelial fragments (Fig. 1), and it was diagnosed as keratomycosis.

She was treated for 5 weeks with amphotericin B and clotrimazole, both topically and generally. The corneal ulcer perforated on 25 Dec. and totally epithelialized, resulting in a faint scar in the cornea. Scrapings were cultured on modified Sabouraud’s dextrose agar and potato dextrose agar in slants and plates. From each of them, homogenous and almost identical colonies were obtained in pure culture with the following characteristics:

Colonies on potato dextrose agar grew rather rapidly at 27°C, floccose to felted, initially white becoming purplish red to pale brown. Colony reverse became dark brown. Conidiogenous cells simple phialides with an apical collar, arose directly from the vegetative hyphae or from conidiophores, tapering distally, 30–45 x 3·0–3·5 μm. Conidia were hyaline, smooth-walled, uniform clavate, straight or slightly curved, cylindrical to fusoid with rounded ends, usually 3-septate (macroconidia), 16–35 x 5–7 μm. Microconidia absent (Fig. 2). Chlamydospores were abundant, hyaline to brown, 1- to 4-celled, globose, 6–9 μm diam, mostly terminal, single or forming nodules (Fig. 3).

According to Booth (1966), this strain was identified as C. tonkinense Bugnicourt by the senior author, and confirmation of my identification was made by Professor K. Tubaki, Institute of Biological Sciences, The University of Tsukuba and Professor T. Matuo, Faculty of Textile Science, Shinshu University.

A living culture of this fungus has been deposited at the Institute for Fermentation, Osaka, Japan (IFO 30561).

Members of the genus Cylindrocarpon are cosmopolitan in soil and sometimes plant pathogenic. The macroconidia are like those of Fusarium but more nearly cylindrical to fusoid with rounded ends. The genera Cylindrocarpon and Fusarium are closely related morphologically and taxonomically. Members of the genus Neotyphoides have been reported as ascomycete states of the genera Cylindrocarpon and Fusarium in some species.

As human pathogens, Fusarium solani (Mart.) Sacc. from the eye and F. oxysporum Schlecht. from the nail are rather common. Cylindrocarpon spp. may in the future prove to be common isolates and etiologic agents from human lesions. Some of the Fusarium spp. erroneously reported as human pathogens might in fact prove to be species of Cylindrocarpon on further re-examination.

In the authors’ opinion C. tonkinense and other Cylindrocarpon spp. may prove to be frequent causes of keratomycoses.
C. tonkinense has never been reported from any sources in Japan (Matuo, pers. comm.), and this represents the first isolation of this fungus from this country.

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REFERENCES
