

Litteratur

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Isaria cretacea van Beyma isolated from human nail in Finland.

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From the Finnish countryside, in the neighbourhood of the town Tampere, we have found *Isaria cretacea* from human nail.

The case reported on is as follows: (M.K.) 57, priest. Anamnestic data on the case: soon after returning to Finland from China in 1929 the patient found that the nail on the middle finger of the right hand did not adhere to the nail bed when growing. Sometimes parts of it adhered but then again it became loose down to the base. The disease was confined to the one finger for a couple of years, when it spread to the other fingers of the right hand and simultaneously to the toes. The nails of the patient's left hand remained healthy. At this early stage the patient saw several doctors and was treated in a variety of ways. Gradually the disease spread from the nails, in the form of a scaly eczema, onto the feet, primarily all round the sole, from which great flakes of skin could sometimes be torn off. The skin cracked occasionally. Any fatty substance improved the condition. Recently the patient has treated the disease with methyl-paraoxybenzoate preparations. They prevented the skin from scaling. The patient's wife has started a similar disease on her feet but not hands.

Status praesens: General condition of patient is good. The nails of his right-hand fingers were thick, spongy, as were those of all the toes. The clinical picture is reminiscent of *tinea pedis*.

Fresh preparations from the toe nails on September 17, 1949, and October 17, 1949, revealed long, narrow hyphae. A fresh preparation from the finger nails on October 17, 1949, revealed an abundance of hyphae. The fresh preparation favours *tinea pedis*.

Culture: Nothing grew in the first culture (Sept. 17, 1949) from the toes, apart from the

ordinary contaminants. The second culture (Oct. 17), from the fingers, revealed growth. Nothing grew in the sample taken from the toe nails.

In the culture made on the finger nails, a growth of white hyphae appeared after 15 days, which gradually turned slightly yellowish. The culture was effected on Sabouraud's maltose agar. To start with, the colony was flat with a striped surface. With culture medium drying up, coremia began to develop. (Fig. 1: 26-day old culture 1/1).

In macroscopic inspection, oval conidia were seen which easily broke loose. The conidia seemed to be connected with the hyphae by a thin stem sterigma. The conidia were fastened both in groups and singly.

Pleomorphism has not developed to date.

Animal test: animal test with guinea pig, both on the skin and intraperitoneally, was negative.

Definition. We assumed the fungus to belong to the *Isaria* group but it was not possible to identify it with the aid of available literature, for which reason a sample was sent to Professor Joh. Westerdijk*), (Centraalbureau voor Schimmelcultures, Baarn) for identification. According to her, the fungus is *Isaria cretacea*.

Biogeography. As far as is known, the present case is the first reported instance of the finding of this fungus in the Northern Countries. *Isaria cretacea*, described by F. H. van Beyma thoe Kingma in 1935 (1), originated in England where H. B. Hutchinson and C. E. Grover found it in Epsom growing in a packet of yeast kept for some time in a moist place.

*) We wish to avail ourselves of this opportunity to express our best thanks to Professor J. Westerdijk for her kind assistance.

Discussion: Fungi of this group, comprising primarily insect parasites, are unlikely to have been found pathogenic in man, whereas it is well known that many fungi of the genus proper of *Sporotrichum* are pathogenic to man.

Due to the genera *Isaria* and *Sporotrichum* being closely related, T. Petch (2) recommends that the genus *Isaria* be divided into several genera (*Sporotrichum*, *Beauveria*, *Spicaria*, etc.) according to their habit of forming conidia. The present fungus could well be listed under the genus *Beauveria* except that the sterigmata typical of the said genus are absent. Van Beyma therefore employs the genus denomination *Isaria*, which Petch too has retained with certain species forming very characteristic coremia.

It is probable that *I. cretacea* in the above onychomycosis was a contamination, particularly as the nails were of a porous substance that may contain almost anything. On the other hand, the substratum of its first finding (yeast)

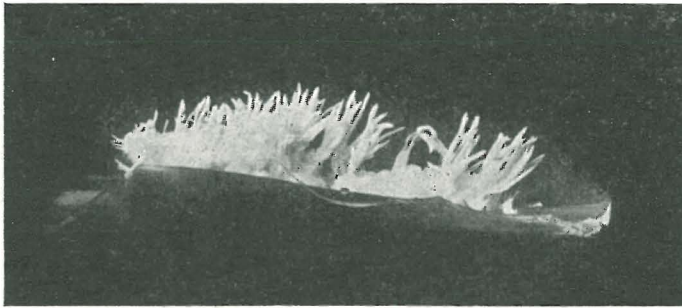
is of such a nature that *Isaria cretacea* might well be able to infect living animal tissue as well.

The finding is likely to remain as a by-finding of *tinea pedis*, probably produced by *Trichophyton album*. But *Isaria cretacea* was not only an incidental contaminant, because it was grown again from a nail sample, taken from the same person 11th March, 1950.

The fungus is being investigated further by us.

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Kuva 1. Fig. 1.

Isaria cretacea van Beyma löydetty ihmiskynnestä Suomessa

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Erästä potilaasta (57-v. pastori, palannut Suomeen Kiinasta 1929, siitä pitäen sairastanut sieni-infektiota oikean käden ja molempien jalkojen kynsissä) otettiin syksyllä 1949 kynsinäytteitä, joissa tuorepreparaattia mikroskoopilla tarkasteltaessa näytti taudin aiheuttajana olevan jokin *Trichophyton*-laji. Näytteistä tehdyissä viljelmissä ei muissa kasvanut mitään, mutta yhdessä kasvoi 15 vrk. kuluttua valkeita rihmoja, jotka vähitellen tulivat hieman kelleriviksi ja muodostivat juovapintaisen litteän pesäkkeen. Elatusaineen (Sabouraudin maltoosiagar) kuivussa alkoi syntyä kauniita koremioita (kuva). Mikroskoopissa nähtiin soikeita itiöitä sekä ryhmissä että yksinäisinä.

Arvelimme sientä *Isaria*-lajiksi, ja erikoiskirjallisuuden ja vertailunäytteiden puutteessa lähetimme sen Hollantiin prof. Joh. Wester-

dijk in määritettäväksi. Hänen ilmoituksensa mukaan sieni on *Isaria cretacea* van Beyma¹⁾. Laji on kuvattu 1935 näytteestä, joka oli peräisin Englannista, Epsomista, missä sieni oli kasvanut kosteassa hiivapakettissa. Muuta tämän lajin löytöä ei ole tiedossamme.

Yritys tartuttaa sieni marsuun ei onnistunut, joten ei vielä voida sanoa mitään sienen mahdollisista loisominaisuuksista. Se oli todennäköisesti vain kontaminaatio *Trichophyton sp.*:n synnyttämässä onychomykoosissa, hohkaisessa, puoliksi irtaantuneessa kynsikudoksessa. Kuten tunnettua eräät lähisukuiset lajit loisivat elävässä eläinkudoksessa, esim. hyönteisissä.

Mainittakoon, että 11. 3. 1950 otetusta uudesta kynsinäytteestä saatiin jälleen esille sama *Isaria*. Tapausta tutkitaan edelleen.