

was found to be the cause of the increased coagulability of the blood after intravenous injections of fresh normal serum.

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Notes on the occurrence of equine sporotrichosis in Montana and the "blastomycotic" form of *Sporotrichum schencki-beurmanni*.

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In 1915 I¹ expressed the belief, based on very inadequate material, that animal sporotrichosis is found also in Montana. Quite recently, through the courtesy of Doctor DuFrene, of Glendive, fresh pus collected from a case of equine sporotrichosis was forwarded to me for diagnosis. Without the least difficulty a typical *Sporothrix schencki-beurmanni* was isolated on Sabouraud medium, and conclusive bacteriologic evidence was thereby obtained that sporotrichosis exists endemically in Montana.

As is customary in our studies on fungi, plain one per cent. glucose agar was inoculated with the pus. The growth on this medium remained perfectly white and thin, becoming thick, moist, very stringy and inelastic in contrast to the typical well-pigmented folded film observed on Sabouraud's agar. The culture did not penetrate into the superficial layers of the agar, and was easily emulsified. It grew well under anaerobic conditions, and produced a rapid septicaemia in rats and rabbits. On one per cent. glucose agar and plain potato, this pleomorphism has remained so far (three weeks and four transplants) constant, but on Sabouraud medium the typical growth invariably appeared in a short time.

Microscopically, such a culture consists of oblong, oval or round, short, monilia-like mycelia with a well-marked double membrane and refractile granules. Some round forms show reproduction by budding and aggregations in pairs or short chains. Long mycelia with typical clusters of spores were always absent.

¹ *Jour. A. M. A.*, 1915, LXV, p. 519.

Macroscopically and microscopically these cultures appeared in every respect like yeast or saccharomyces.

The "blastomycotic" pleomorphism has been observed by Gougerot for the *Sporotrichum beurmanni*, but has never been described for the American strains. When transplanted on very moist and soft agar, I repeatedly noticed, for at least three to four days, the yeast-like character of some human strains isolated from cases in North America, but such cultures always returned to the typical growth within ten days.

The tendency of a recently isolated strain of sporothrix to revert to its parasitic pleomorphism under unfavorable conditions (moisture, absence of oxygen, and carbohydrates) appears to be a characteristic of the European as well as of the American types, and clearly proves their close botanical relationship with the "blastomyces."

Serologic tests¹ have previously shown that complement fixation is regularly obtained with sera of infected or immunized animals when various yeasts are used as antigens.

¹ *Amer. Jour. Trop. Diseases and Preventive Medicine*, 1915, III, 144.