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## BLACK TONGUE.

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IN a recent interesting monograph,\* Dr. F. Brosin, of Berlin, has given an exposition of the present state of our knowledge of a subject as yet but little understood—"black tongue."

Lingua nigra, nigrities linguæ, glossophytia, langue noire, nigritie de la langue, schwarze Zunge, schwarze Haarzunge, is a disease characterized by an enormous hypertrophy of the filiform papillæ and their epithelial cover, and a grayish-black or fully black discoloration on the upper surface of the tongue. It usually appears in patches, which look as if covered with black hair or wool, matted together, or as resembling closely a field of wheat thrown down by the wind. Being a purely local disease, without any gravity, it is only liable to cause a feeling of dryness in the mouth of the patient. When it covers the tongue to a large extent, as is sometimes the case, it is extremely annoying on account of the disagreeable-looking discoloration, which often proves refractory even to the most energetic treatment. The duration of the disease may be from ten days to twenty years, or it may come and go for a period of years. Black tongue is one of those rare diseases which are liable to puzzle the

\* *Ergänzungsheft zu Dr. Unna's "Monatshefte für prakt. Dermatologie,"* 1888.



physician, who, unaware of its existence, will invariably be inclined to treat the disfiguring discoloration as a trifling matter easily to be got rid of. But he will be surprised to see the patient come back to him after a time with the same amount of "black tongue," but with decidedly less confidence in the ability of his medical adviser. I therefore think it is not only of theoretical but also of practical interest to call attention to this peculiar affection, which may often escape medical observation, and, in fact, is probably not so rare as the statistics seem to indicate. A case of "black tongue" which I have recently seen was in a patient of the New York Hospital, out-door department, to whose abnormal condition of tongue Dr. L. D. Bulkley kindly directed my attention.

A young man, about twenty-eight years of age, came to the skin department with florid symptoms of syphilis. Under adequate specific treatment the maculo-papular eruption which was present promptly disappeared, but numerous mucous patches began to develop on the lips and tongue. These latter proved very refractory to treatment. In spite of the most careful and skillful cauterizations with nitrate of silver and chromic acid and the repeated application of solutions of chlorate of potassium, sulphate of copper, and permanganate of potassium in varying strength, and though internal specific medication and hygienic measures were not neglected, the mucous patches were very slow to disappear, and new ones kept on showing themselves. The affection finally seemed to yield to treatment, there remaining only a diseased spot in the center of the organ of the size of a five-cent piece. When the patient returned a week later his tongue presented the appearance described above. A spot, looking as if covered with short, black hair or wool, was situated in the middle of the tongue, extending a little to the right, irregularly shaped, about an inch in length and three quarters of an inch in width, with its base toward the root of the tongue. Some of the black mass, which was removed with a pair of curved scissors, proved under the microscope to consist of enor-

mously elongated filiform papillæ, covered with hypertrophied epithelial cells, loosely overhanging each other, not unlike an ear of corn the grains of which have been taken out. (See figure.) The unstained specimen had a diffuse sepia-brown color, the epithelia, however, having a darker hue than the underlying connective tissue.



Elongated papillæ covered with hypertrophied epithelia, showing diffuse pigmentation.  $\times 200$ .

I had no further opportunity of following up the case, but what I had seen of the clinical as well as microscopical aspect of the case was sufficient to convince me that this condition was "black tongue." There are about forty cases of this peculiar disease on record. They include both sexes and all ages, but show that "black tongue" principally affects those who are debilitated by age or disease. First described by the famous Rayer in 1835, then by Hyde Salter (London, 1849), Eulenburg (1853), St. Germain (1855),

it has been made the subject of observation by Raynaud, Clarke (1873), Féréol (1875) and others, Lancereaux, Dessois in 1878, Rayer (1883), Sell (1885), Schech (1886), etc., and recently by Dr. Brosin as mentioned above. Dr. Solis-Cohen, of Philadelphia, is, so far as I know, the only American writer who has reported a case of "black tongue." In regard to the ætiology of the disease, it has been maintained, especially by French writers, that "black tongue" is caused by the vegetation of a peculiar fungus. Dessois described spores (sporules) of about 0.005 millimetre diameter, surrounding the elongated papillæ principally on their bases. Inoculations of the micro-organisms on the author's tongue, and another on the arm of a patient, had a negative result. Only very large accumulations of these spores exhibited a sepia-brown color. Dr. Brosin, who, like others, found the same micro-organisms, has proved, by carefully cultivating and examining them, that they are a form of *Oidium albicans* poorly developed. The result of his researches is, furthermore, that neither the hypertrophy of the papillæ nor the black color is due to parasitic vegetations.

The black color is caused by the accumulation of pigment, the nature of which is not definitely known. It is (as it was in my case) diffusely distributed, not granular, and of a light-brown color—facts which indicate that it is of that kind of pigment which, not originating from the blood, chemically does not contain iron, but a considerable amount of sulphur. It is probably the same pigment which, as Dr. Unna has shown, produces the black color in comedones or in ichthyosis histrix seu nigricans. The analogy which the latter disease presents with "black tongue" is most strikingly apparent, hypertrophy of the papillæ and horny modification of the epithelial layer forming the main features of both pathological processes. It can not be

denied that the drying or oxidizing influence of air, the chemical properties of certain food, and numerous drugs play an important part in bringing about the black color, which (it has to be borne in mind) is absolutely different from a superficial and accidental stain. That the agencies above mentioned are liable to have this peculiar effect only on those places where there is a pronounced degeneration of the papillæ and their epithelia seems to prove that the pathological condition is the *conditio sine qua non* of the black pigmentation. I will conclude these few remarks with the suggestion that there is no reason why the excessive growth of some fungus, traces of which may be found in every mouth, should not act very much in the same manner as chemical preparations, and consequently, in some instances, be an essential ætiological factor.

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