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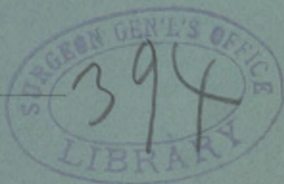
ACTINOMYCOSIS IN MAN,

WITH THE REPORT OF A CASE.

BY

GEORGE A. BODAMER, M.D., B.S.,

PHYSICIAN IN CHIEF TO THE GERMAN HOSPITAL, PHILADELPHIA, ETC



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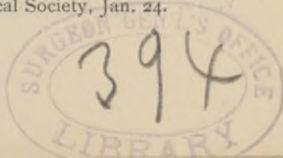
**ACTINOMYCOSIS IN MAN, WITH THE REPORT
OF A CASE.¹**

BY GEORGE A. BODAMER, M.D., B.S.,
PHYSICIAN IN CHIEF TO THE GERMAN HOSPITAL, PHILADELPHIA, ETC.

ALTHOUGH about forty-nine cases of actinomycosis in man have been recorded abroad, but four authenticated cases are found in American medical literature; these cases are two by Dr. Murphy, of Chicago (*N. Y. Medical Journal*, 1885, vol. xli. pp. 17-19); one by Dr. Schirmer (*Chicago Med. Journal and Examiner*, vol. liii. p. 354); and the last by Dr. Ochsner (*Ibid.*, vol. liii. pp. 1-3), to be quoted below. Hence I think the case which came under my observation worthy of record.

My investigations of actinomycosis in animals, which I made in 1883-84, at the Pathological Laboratory of the University of Pennsylvania, are about to be published in the *Journal of Comparative Anatomy and Surgery*. Since these investigations I have obtained several more cases in animals, making a total of ten cases.

¹ Reported to the German Medical Society of Philadelphia, January 14, 1889, and to the Pathological Society, Jan. 24.



My case of human actinomycosis is as follows :

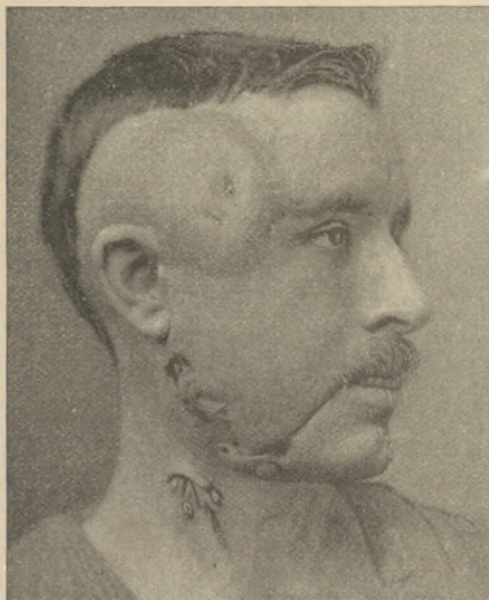
Wm. M. H., aged thirty-two years. Born in England ; occupation miner ; mother, four brothers, and three sisters living and in good health ; father died of senile debility. Patient had ordinary diseases of childhood, besides pleurisy at the age of twenty-eight years. He came to this country at the age of twenty-one years, and continued his occupation steadily as a miner, and he was often subjected to injuries of the head. In 1877 he was severely struck on the right side of the head by a prop. He continued to work in the mines, and while in the Stockton Coal Company's mines, Luzerne County, Pa., he noticed for the first time a swelling at the angle of the right inferior maxillary bone, which would go and come ; and, as the patient expressed it, came to stay in the winter of 1882, and soon after reached the size of a chicken's egg, when he became alarmed, and began poulticing it ; at the same time he had the three upper and three lower back molars of the right side drawn. All six teeth were sound.†

Patient states he was advised to keep the gums bleeding and irritated, believing this treatment would reduce the swelling and effect a cure. A growth, however, promptly made its appearance, filling up the cavity made by the extraction of the teeth of the lower and upper jaws. About this time he ran against a projecting drill (an iron rod six feet in length with a sharp, square end two inches broad), which severely injured the tumor ; the wound bled profusely but healed promptly.

During 1883 the swelling made little progress, and in May, 1884, he came to Philadelphia, and was admitted to the surgical wards of the Pennsylvania Hospital, where, as he states, a tumor was re-

moved. He then returned to work, and had no medical treatment for four years, when he again entered the Pennsylvania Hospital in November, 1888, having in the meantime sustained some more injuries of the diseased jaw. There is no evidence that a diagnosis of actinomycosis had been made.

FIG. 1.



Case of actinomycosis.

On Jan. 11, 1889, he came under my observation at the German Hospital, when I examined him in conjunction with Drs. John B. Deaver and F. Gross.

Present condition: Patient is a muscular, well-nourished, robust man, of five feet five and a half inches in height, with good complexion, weighing one hundred and fifty pounds, and has a good appetite. The only lesion observed is a swelling on the right side of the head, face, and neck (see Fig. 1, from a photograph) which consists of a hard, infiltrated, uniform mass, extending from the clavicle to the temporal region, involving the anterior half of the temporal muscle, the muscles of the face, and the glands of the neck, and evidently in intimate union with the cranial bones of the region described. The swelling implicates also the cavity of the mouth; the buccal muscles, as well as the lower and upper jaw, are much enlarged from the swelling, which causes an ankylosis, so that the patient cannot separate his teeth more than a quarter of an inch, and is unable to take food except by forcing it through this narrow space; this, the patient said, has been the case for the last two years. While mastication is next to impossible, the power of deglutition appears to be perfect. He uses mainly food in a crushed or liquid state.

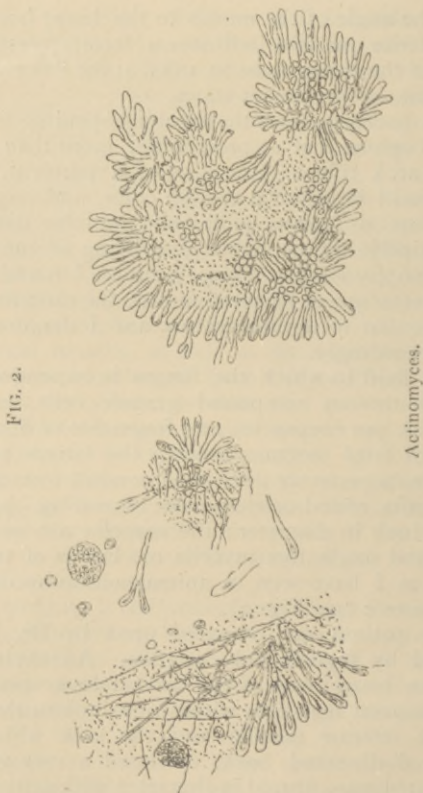
The swelling is uniformly firm except in the temporal region, where there is a fistulous opening; another fistulous opening is at the angle of the jaw, but numerous scars upon the neck indicate that there were a number of fistulous openings which have healed. A third fistulous opening into the mouth corresponds to the third lower molar tooth. The patient states that there had been a great deal of suppuration from the former fistulas. On the whole, the right side of the head, face, and neck is about one inch thicker than the left side; the pain is slight, somewhat increased by pressure and is more intense during the night. A large scar extending

from the angle of the mouth to the lower border of the inferior maxilla indicates a former removal of some of the tumor mass in 1884, at the Pennsylvania Hospital, as the patient states.

The discharge from the fistulous openings is sometimes copious, but at present not more than a few drops at a time; it consists of a purulent, odorless, viscid liquid of a grayish color, and suspended in it are numerous yellowish granules distinctly recognizable by the naked eye, being of the size of small poppy seeds. These granules I found under the microscope to be actinomyces, the radiating fungus peculiar to actinomycosis, and I diagnosed the case accordingly.

The fluid in which the fungus is suspended contains numerous compound granule cells, granular material, pus corpuscles, and fragments of fibres in a state of fatty metamorphosis; the fungus presents itself in its perfectly developed or adult form as radiating tufts, round or elongated, measuring $\frac{1}{200}$ to $\frac{1}{50}$ of an inch in diameter; the mycelia are unusually plain and single free mycelia or clusters of two and three, as I have seen in animal actinomycosis, are quite scarce (see Fig. 2).

The patient was operated upon by Dr. Deaver assisted by myself, Feb. 9, 1889. An exploratory incision being made from the fistulous opening in the temporal region to within one inch of the angle of the inferior maxilla and the skin which was involved dissected back, disclosed a very vascular infiltrated mass, fibroid in character, with actinomyces studded through its entirety; also two cavities one-half inch in diameter which contained material in a state of fatty metamorphosis which, under the microscope, revealed pus, compound granule cells, blood, oil globules, molecular débris, and the fungus actinomyces.



There was a profuse general oozing of blood over the whole surface of the exposed swelling. A sinus led from the fistulous opening in the temporal region down to the zygoma, which was necrosed, and beneath the same into the pterygo-maxillary region.

A part only of the tumor mass was removed, and the exposed growth was thoroughly curetted and irrigated with 1:1000 sublimate solution; a drainage tube was inserted, the skin adjusted and the wound dressed antiseptically.

The four cases of actinomycosis in man recorded previous to this case of mine are as follows:

CASE I.—A female twenty-eight years old, suffered severe toothache of left lower jaw with subsequent swelling in mouth and throat, the swelling (abscess in left tonsil) was opened and patient recovered rapidly. About seven months later, a swelling the size of a walnut appeared on the left side of the neck, which was lanced; the pus contained actinomyces. As the swelling and induration continued to increase, an operation was performed and the growth removed. Patient made a rapid recovery, gaining twenty-six pounds in five weeks and now (1885) is in good health.—Dr. Murphy, *New York Medical Journal*, 1885, vol. xli. p. 17.

CASE II.—Thomas C., aged eighteen, while in Ireland had severe toothache; later, a swelling appeared and enlarged with more or less pain; a carious tooth was found, a swelling was punctured, and a few drops of pus escaped which contained actinomyces; the sinus was scraped out and the parts completely healed. Later, a swelling reappeared in the same place which was opened and a drainage tube inserted, after which Dr. Murphy did not see the case, but heard that the opening healed. (Ibid.)

CASE III.—A Pole, twenty-five years of age, family history good. When eighteen years of age, while chopping wood, received a slight incised wound of cheek. Following this injury both jaws began to swell; the swelling in the left side disappeared and that on the right side was opened and a fistula followed. In June, 1886, patient passed into Dr. Schirmer's hands. The exudate from the fistulous opening was examined by Prof. Fenger and Dr. Schirmer; and actinomyces was found. Patient lost his appetite, became emaciated, followed by severe cough and the expectoration contained actinomyces.—

Dr. Schirmer, *Chicago Medical Journal and Examiner*, vol. liii. p. 354.

CASE IV.—Man, aged fifty-six years, whose occupation was stock-raising and dealing, was much exposed to draughts and cold. He suffered pain in the left antrum of Highmore, and although he had six teeth drawn which were sound, no relief followed. For six months patient suffered excruciating pains in left antrum and both eyes. Early in 1878 there was a spontaneous opening of the abscess into the pharynx, from time to time evacuating considerable pus and blood; some of the discharge entered the larynx at night giving rise to severe cough. In 1880 was operated upon, curetting and irrigation of the parts resorted to; irrigation was kept up two years, patient suffering continuous pain. In 1885-86 severe cough with dulness over lungs, roughened respiratory sounds and mucous râles followed by great loss of weight. Microscopic examination of the sputum revealed actinomyces.—Dr. Ochsner, *Journal of Amer. Medical Association*, 1886, pp. 608-610; *Chicago Medical Journal and Examiner*, vol. liii., No. vi., pp. 1-3.

Lack of space will not permit me to refer to the European cases of human actinomycosis in the present article.



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