hysterical patient, because this and the study of the symptoms during an attack of violent emotional outbreak will make it possible for him to arrive at the latent or unconscious thoughts of our unfortunate sufferers. Psychoanalysis lays great stress upon the dream interpretations, but to my knowledge, I think that such a course, coupled with that of the study of the manners in which the patient goes through her emotional demeanor, would permit us to reach the rendezvous much earlier and easier.

The psychoanalyst having slowly unravelled the whole life history, by means of regular interviews in a conscientious way, the patient will herself notice distinct parts in her life history which have had important connections with the emotional attacks of hysteria. She will discover her weaknesses, also her failures which gave her a diminution in self-control: she will likewise perceive that there has been something similar in every attack which she has had: something which from her early life has really repeated itself.

The present worry or trouble has only served to displace the conscious by the unconscious, just as the friction of a match causes the sulphur and phosphorus to ignite.

REPORT OF TWO CASES OF BLASTOMYCOSIS.*

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SYSTEMIC BLASTOMYCOSIS, although not a common disease, is probably not as rare as some of our text-books seem to suggest.

Fifty cases have been reported in medical literature since Busse reported his case in 1894. I have been unable to find a single case reported from Michigan, although Sihler, Pappard and Cox, in their report of a case, mention the fact that the majority of the cases reported have been from the vicinity of Chicago, and they mention Michigan as a locality where cases have been found.

The disease is particularly important in connection with diseases of the chest, because the onset, early history, physical and x-ray findings are so similar to a tuberculous invasion. Necropsied cases show the lungs to be more fre-

quently affected than any other organ, with 97 per cent. positive, the skin running second, with 90 per cent. As the disease progresses, lesions become numerous and may involve any part of the body.

The portal of entry is probably by way of the respiratory tract.

Of the cases reported, all but three were males. Ages ranged from 17 years to 63 years, the majority of the cases being in the third decade. Unhygienic surroundings seem to favor the development of the disease. Italians and Poles are more prone to the disease.

The diagnosis depends upon finding the yeast, although the characteristic skin lesions and presence of multiple abscesses are rather convincing evidence and should at least suggest blastomycosis.

To date, there is very little to offer in way of treatment, except in surface lesions where surgery can be employed.

Potassium iodide, copper sulphate, vaccine therapy, roentgen ray, have been used, but the number of cases treated has been too small to draw any definite conclusions in favor of any of these therapeutic measures.

The disease runs a subacute or chronic progressive course; duration of reported cases ranging from four months to 17 years. Nine out of every ten progress to death within a year.

CASE No. 3089. Single, male, white, 32 years, machinist, born in Belgium. Has been in states five years, living all the time in Detroit.

Family History—Father died at age of 40. Result of accident. Mother in good health last time heard from. No tuberculosis in father or mother's family. One sister living and well. Previous History—Born and brought up in city. Not especially good environment; healthy childhood. Began work at 13 years of age. No intimate exposure to tuberculosis, as far as known. Denies venereal disease and alcohol. Smoked about ten cigarettes a day, which were inhaled. Tea and coffee moderately. Always been well and strong, up to the time of present illness. Operation for inguinal hernia 1918. Influenza, December, 1919. Present Illness—Last perfectly well, March 1919. Following month, had feeling of lassitude, noted lack of staying power. Slight cough, occasional chills and night sweats. Did not feel well enough to work, but continued until following December, when illness became acute and was diagnosed influenza. He remained in bed five weeks, then began to get around, and returned to work. Strength did not return to normal. Continued

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to cough and had occasional pains in chest. Worked only four weeks. Weakness forced him to give up work. Continued to lose weight and strength. Entered a local hospital, remained for six weeks; returned to his home unimproved. June 22, 1920, was sent to the Detroit Tuberculosis Sanatorium by U. S. P. H. Service, with diagnosis of pulmonary tuberculosis. On admission, chief complaints were pains in knees, ankles and left chest. Occasional night sweats. Extreme weakness.

Physical examination—Well developed, poorly nourished man, abundant growth of brown hair. Slight exophthalmus. Thyroid not enlarged, pupils normal to light and distance. Tumefactions over left eye size of hickory nut, slightly smaller one right eyebrow. Skin dry, acne on back. Scar left lower quadrant, palpable inguinal glands not tender. Abscesses on both legs and feet. Feet swollen, tender. Teeth—Poor condition, retraction of gums, evidence of pyorrhea. Tongue—Median extension, slight tremor, clean. Tonsils—Small, fibrous. Appetite fair, digestion unimpaired, constipated, abdomen contains considerable gas. Spleen not palpable, liver dullness within normal limits. Heart—Rapid, weak action, no murmur blood pressure. Systolic, 96. Diastolic, 58. Radial pulse, fair quality. Pulse range, 100-140. Temperature range, 98-103. Chest—Slender type, slight scoliosis, no pulsations noted. Clavicles and scapulae prominent. Retraction at apices. Restriction of respiratory excursions at left base. Vocal fremitus increased left from inferior angle of scapula to base. Slight dullness right apex to third rib and fifth vertebral spine. Slight dullness left apex to third rib and fifth vertebral spine, increased to marked dullness from third rib and fifth vertebral spine to base. Broncho vesicular breathing both apices moist râles left third rib and fifth vertebral spine to base, increased by cough. Urine—Amber, acid 1022, negative to albumin and sugar. Few pus cells. Blood Count—Leucocytes, 22,750; erythrocytes, 5,280,000; polymorphonuclear, 84%; S. mononuclears, 11%; L. mononuclears, 3%; transitionals, 1%; hemoglobin, 64%. Wassermann, negative. No sputum; does not expectorate. Pus from abscesses contained blastomyces. Patient's condition grew rapidly worse, physical signs of chest increased, abscesses, discharging sinuses and cutaneous lesions became more numerous. At one time, 14 discharging sinuses were being dressed. Patient died after 14 weeks' residence.

X-ray report previous to his admission.—Stereoscopic plates were made of the chest. The heart and aorta are normal in position and size. Left chest has a rounded shadow, with increased density falling in middle third of the lung from the heart to axillary line. There is a smaller area in base of lung which is clearing. There is some peribronchial infiltration in the upper third of lung. Right chest—The hilus shadow is con-

siderably enlarged and there is a large amount of peribronchial infiltration scattered throughout the lung, especially in the upper half. Conclusions—The shadow in left chest is suggestive of an unresolved pneumonia or interlobar pleurisy with effusion. We are inclined to believe pneumonia to be probable origin. The changes in both uppers gives us the impression of having tuberculosis in the origin.

X-ray later.—Films of chest show a curvature of the spine to right. The right leaf of the diaphragm is well visualized. The left leaf of the diaphragm is high. There is no evidence of fluid in the phrenocostal angle. There is a marked consolidation over the lung field on the left side and over the greater part of the lung on the right side, except the phrenocostal angle. The heart shadow is not clear. There is distortion of the trachea, it being pulled to the left. The appearance is that of advanced bilateral consolidation. In the upper right, we note small areas which look like multiple small cavities.

Autopsy—Body is that of an extremely emaciated man about 35 years of age. There are numerous fungating lesions about the nose, lips and the rest of the face. These vary from the size of a pea to the size of a quarter, have crater-like, raised margins covered with scabs. The base is boggy and soft. Upon pressing the lesion, small droplets of the pus exude in many little points from the base of the lesion. There are dressings in place over the knees and ankles, covering discharging sinuses in those regions. There is a superficial cutaneous lesion in the left thorax which is found to communicate with a diffuse purulent lesion of the intercostal spaces of the left thorax. On section, the panniculus is found to be practically absent. There is no gas or fluid in the abdominal cavity and no signs of post-mortem decomposition. On incising the sternum, we find the lower end to be involved in a diffuse purulent process. There are discharging sinuses between the third and fourth, fourth and fifth, fifth and sixth ribs, which communicate with the pulmonary tissue below on the left side. On removing the sternum, we find the left lung completely adherent by old organized fibrous tissue, with numerous sinuses discharging pus, opening from the interior of the lung to the intercostal spaces. There is no empyema pocket in the pleura. The pericardium is everywhere adherent to the heart and cannot be dissected off. There are numerous whitish spots over the auricle resembling small indolent, purulent infiltration of blastomycotic origin. Mediastinal tissue is densely bound together. On removing the heart, we find the muscular and valvular portions without gross lesions, the blood vessels in the normal state. There is no free pus in the pericardium, but a low grade, long standing, fibrous, adhesive, pericarditis. The right lung is very voluminous, firm, and relatively airless, and on section presents the

picture of a diffuse, purulent, lobular, bronchopneumonia. The general appearance of the cut section resembles closely that of an early stage of acute pneumonic phthisis, but on pressure of these yellowish surfaces with the knife, small pin-point like droplets of pus can be caused to exude. There is no old fibrous organized process and no cavitation. The mediastinal lymph nodes are swollen, gray and oedematous. There are no purulent areas nor caseation in the lymph nodes. The left lung has to be dissected off from the costal pleura. The cortex is partially torn upon delivering from the thoracic cavity. On section, it presents very much the same picture as the right, except that there is an area in the lower lobe which is more fibrous and is grayer color, shows more organization, and is much older than the rest of the process. Inspection of the abdomen reveals all the organs to be free from evidence of these lesions, except the spleen, which is diffusely spotted over with tubercle-like points varying in size from a pinhead to a pea, but on pressure exuding the pin-point like droplets of pus. There are a few very early areas in the right kidney, and the right adrenal has three such spots in its cortex. The abdominal organs are otherwise entirely negative in the gross.

Pathological Diagnosis—Pulmonary, systemic, cutaneous blastomycosis.

Case No. 1767. White, male, 32 years, married, Italian, fireman. Family and previous history negative. Dates present illness back three months. At that time, had sores on body, and also cough. Pulse range, 84-100. Temperature range, 97-100.2. Patient died after four weeks' residence.

Autopsy—Very emaciated man, apparently 34 years of age, with reddish brown hair and beard. Marked fungating lesions are seen over alae nasi, cheeks, forehead, and superior maxillary region, also on the right and left hands, both feet, and left lower leg. Those on the upper part of the body are the characteristic papillomatous lesions of blastomycosis. There are tattoo marks on both arms. There is no oedema of extremities. Small lesions on the penis are not characteristic. On opening the thorax, the diaphragm is seen to extend to the fifth rib on the right. The pericardium contains the normal amount of clear amber fluid. The cardiac apex is seen at the fifth rib, the left lung is bound completely to the costal pleura by old adhesions. The heart is normal in size, the left ventricle is empty, the mitral, the auricle, and ventricle are negative. The muscle is browner than normal, and shows no fatty changes. The right ventricle is empty. The tricuspid admits three fingers loosely. A small post-mortem and chicken-fat clot is in the right auricle and extending into the pulmonary vein. The pulmonary artery and veins are negative. The first part of the aorta shows moderate

nodular sclerosis. The semi-lunars are normal. The left and right coronaries show no sclerosis, and appear normal. The heart is negative, except for moderate hypertrophy of the left ventricle and moderate brown atrophy. On removing, the left lung does not crepitate to any great degree. The costal pleura is attached by strong fibrous bands. On palpitation, shotty nodules are felt throughout. On section, the parenchyma is filled with firm, yellow masses, rather more yellow than the usual tubercle. The center of the mass does not break down and form pus. The right lung is voluminous, and not adherent. It contains more air than the left. It is beset throughout by large, hard discrete nodules, from pea to hickory nut size. The spleen is normal in size and shows a post-mortem autolysis and digestion; it is otherwise normal. The liver is somewhat enlarged and slate colored. It is a good deal firmer than normal on section. It shows a moderate passive congestion and fibrosis, but no blastomycotic spots. The left adrenal is normal in size and shows no changes in the medulla. The left kidney is somewhat larger than usual. On section, it shows passive congestion, but no other lesion. The right kidney is in every way similar to the left. It shows passive congestion, but no other lesion.

Pathological Diagnosis—Pulmonary and cutaneous blastomycosis.

BIBLIOGRAPHY.

- Hurley: Jour. Med. Research, January, 1916, 33, 499.
 MacLane: Jour. Infect. Dis., August, 1916, 19, 194.
 Wole and Bel: Arch. Int. Med., July, 1916, 18, 103.
 Montgomery and Walker: Jour. A. M. A., April 5, 1902.
 Stober: Arch. Int. Med., April 15, 1914.
 Sihler, Peppard, Cox: Lancet, April 15, 1917, 37, 253.
 Dennis: Am. Otol., Rhin., Larynx, June, 1918, 27, 571.
 Morris: Jour. A. M. A., Dec. 6, 1913.

“SURGICAL ASPECTS OF ABDOMINAL TUBERCULOSIS IN CHILDREN.”*

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ABDOMINAL tuberculosis in children like any disease in which the diagnosis is often difficult and for which different forms of treatment yield varying success, gets very easily into a confused state. Such is, I believe, the present condition of this disease. For the sake of clarification it seems wise to remind you of some of the fundamentals and to emphasize certain facts brought out by a study of cases occurring at the Children's Hospital.

In spite of repeated statements in the literature that tuberculosis of any form and particularly abdominal is rare in the first year of life, we have found it as frequent at this age as at any age up to twelve years.

* Read before the New England Pediatric Society, at Boston Medical Library, on May 13, 1921.