come separated, exposing the vertical fibres of the rectus muscle. In none of these specimens were there either omentum or bowel in the sac at time of inspection. In most cases the peritoneum was perfectly smooth behind the tumor, but when the tumor was pulled forward the result invariably was that the peritoneum could be drawn through the ring. Dissection showed that the mass of fat was closely connected with the peritoneum by fibrous bands. In other cases pockets of peritoneum had been formed; and these extended through the ring. Into this depression omentum could be forced. The size of the pocket of peritoneum had no relation to the size of properitoneal fat. The fat was usually distributed irregularly.

General considerations.—By the term *hernia*, we mean the protrusion of a portion of the abdominal contents through an opening in the abdominal parietes. By the term *hernia epigastrica*, we mean the protrusion of one or more of the abdominal viscera through the abdominal wall in the region of the epigastrium. This area is usually bounded by the xiphoid cartilage and the free borders of the cartilages of the ribs above and laterally, and extending as low as the level of the umbilicus. In this area are included the broad portion of the linea alba, the linea semilunaris and the linea transversa of the rectus muscle. At the umbilicus and in the femoral and inguinal regions are preformed openings, where the abdominal wall is naturally weakened. *Herniæ* in these regions make their appearance in these weakened places. In the epigastrium there are no such performed openings of much apparent importance, but under certain conditions the openings ordinarily occupied by small vessels and nerves become much dilated, and are the usual site of epigastric hernia.

An understanding of the anatomical and clinical features of epigastric herniæ and fatty tumors in this vicinity is of great importance in medical clinics, particularly in reference to diseases referred to the abdominal viscera. Many of the most troublesome cases of such hernia appear in medical clinics, and the symptoms are referred to the gastro-intestinal tract. They may appear at a time when objective signs are few and easily overlooked, unless particular examination is made.

Compared with the occurrence of all other herniæ, those in the epigastrium are not common. In a series of 18,000 cases of all herniæ, 145 were of the variety known as *hernia epigastrica*. They are usually single, but occasionally there may be 2, or even 3, present at the same time. It is not unusual to find one true hernia associated with a protrusion of properitoneal fat which does not contain sufficient sac to allow of the escape of omentum into it. This may be a forerunner, however, of a second true hernia. It may remain stationary and never develop into such hernia. It is not uncommon to find these fatty tumors and herniæ associated with herniæ in other regions. The condition known as "*hernia disposition*" applies equally to epigastric herniæ. It is found that this variety of hernia is rather peculiar to adult life,

and that the great majority of cases are observed in patients over 30 years of age. In reviewing the different cases, it will be seen that 1 patient was afflicted at the age of 4 months (Case I). This condition occurs much more commonly in males, and particularly in the working class. They do not seem to be more common, however, in obese than in poorly nourished individuals.

(To be continued.)

ABSCESS IN THE POSTERIOR MEDIASTINUM IN CONNECTION WITH POTT'S DISEASE.¹

THE REPORT OF A SUCCESSFUL OPERATION FOR THE DRAINAGE OF SUCH AN ABSCESS.

BY JOEL E. GOLDTHWAIT, M.D., BOSTON.

THE following case is reported in order to emphasize the importance of, and possibility of, operation for the drainage of abscess in the posterior mediastinum, when its presence by pressure causes serious symptoms. It has been my fortune to see four cases, in which abscess in this region was diagnosed in connection with Pott's disease. Three were children and one an adult. Three—two children and one adult—died suddenly, the death being due apparently to pressure upon the heart or vagus nerve. In one case, the one reported here at length, the symptoms disappeared with the drainage of the abscess, and the child is now well as far as this feature is concerned. In the case of the adult operation was attempted, but the abscess was not located with the first incision, and the patient's general condition was so poor that at that time it did not seem wise to do more. In the light of later experience it seems probable that, had the operation been carried through, the patient's life might have been saved. In the two other cases death came suddenly, while the children were in bed, and during a paroxysm of dyspnea. The death of one of these children occurred the night previous to the morning on which the operation was to have been performed, and should emphasize the fact that no delay should be allowed after the condition is once determined.

The chief symptom in these cases, upon which the diagnosis has been based, is dyspnea, paroxysmal in character, with more or less of the tubular or metallic breathing, as is seen in acute laryngitis. The attacks pass off after a comparatively short interval, at times leaving nothing to show for it, while at other times the laryngeal quality to the breathing persists. At such times the action of the heart is rapid and somewhat irregular. The attacks recur without, so far as can be determined, any reason, and have been repeated in the cases here reported until, with three of the patients, death occurred in one of the attacks. With the other child the attacks were entirely relieved by drainage of the abscess. The heart, lungs and throat in all of these cases have failed

¹ Read before the meeting of the American Orthopedic Association, held in Niagara, June 11, 1901.

to show any evidence of disease that could produce such symptoms.

In one other case a similar condition was present, only the attacks were so mild that operation was not deemed necessary, and the child gradually improved, the attacks entirely disappearing under bed treatment, with the spine hyperextended. It seemed probable in this case that a small abscess was present which was gradually absorbed.

In all of these cases the upper dorsal region was the seat of the osseous disease.

In such a condition the abscess apparently lies in front of the spine, usually more to one side than the other, and, as was demonstrated in a pathological specimen shown before the association several years ago by Dr. Bradford, the heart and trachea are both pushed forward.

The child upon whom the operation was performed was five and a third years of age, and had had disease in the region of the third and fourth dorsal vertebrae for one year. During that time mechanical treatment had been followed with reasonable care, and it was while the child was at the Convalescent Home, in connection with the Children's Hospital, that the attacks of dyspnea and noisy breathing began. At first the condition was supposed to be croup, but as the attacks persisted, and as the larynx was normal, the child was sent into the hospital. A diagnosis of abscess in the posterior mediastinum was made, and soon after, March 30, 1901, the operation was performed. This consisted of a longitudinal incision about three inches long, just outside of the transverse processes on the right of the spine, opposite the seat of the disease. A rib was exposed close to the transverse process and just below the apex of the kyphos. The periosteum was separated, and about one inch of the rib was removed. Through this, going in behind the pleura, the spine was explored, but the abscess could not be made out. The spasmodic and rapid breathing made it impossible to differentiate between the inferior vena cava and an abscess.

At this time the child collapsed, and was supposed to be dying. Realizing that the only hope lay in draining the abscess which was causing the pressure, with a director a quick opening was made directly into the seat of disease in the spine. From this opening was discharged a small amount of pus. A gauze wick was passed into this opening, a gauze pad placed over a small opening which had been made in the pleura, a loose outside dressing applied, and restoratives administered.

The child gradually rallied, the breathing improved and became normal three or four days later, when there was quite profuse discharge from the wound. After this the convalescence was uneventful. At the end of five or six weeks a plaster-of-Paris jacket was applied, with the spine hyperextended, and since then the child has been about and doing well.

In the light of the operation the only modification of the treatment in another similar case would be to make the incision upon the left of the spine

instead of the right. It seems probable that the aorta could be more easily recognized, and its presence would cause less inconvenience than the vena cava, which was hard to positively recognize upon the right.

In case the abscess does not present under the incision, puncture of the spine at the seat of the disease is probably the safest procedure, even though it drains the abscess through the neck of the sac, theoretically the least favorable position.

PATHOLOGICAL LESIONS IN RHEUMATOID ARTHRITIS.

BY C. F. PAINTER, M.D., BOSTON.

In presenting this subject a much-disputed field in medicine is at once thrown open for discussion. It is not to be a part of the scope of this paper to separate out on clinical grounds one type from the many which go under this caption, though this would be a comparatively easy task. Neither is it my purpose to invent a new name for an old disease. I will go so far as to say that the term here used is entirely inappropriate for a disease with the reasonably well-established etiology and definite morbid changes presented by the disease described. But nomenclature in medicine has not kept pace with progress in clinical and pathological diagnosis, and an appropriate name must come after proper grounds for giving it have become established beyond peradventure.

That you may know what are the clinical characteristics of the type of disease whose pathology I am to discuss, it will be necessary that you understand my clinical point of view. At the outset, therefore, I will briefly set this forth, and show a few photographs of the gross anatomical lesions of what I shall regard as rheumatoid arthritis, for purposes of description, hoping to show the pathological grounds for this belief later on in this discussion.

I am sure the reason, or at least one of the chief reasons, why so much confusion has existed regarding this subject, and so many pathological lesions as well as clinical phenomena have been hopelessly confounded, is because the clinician and the pathologist has heretofore worked so independently. The clinician, until very recently, has not availed himself of the aid of laboratory methods, and has sought to establish rules for diagnosis on data which would not bear the test of the microscope. The pathologist, on the other hand, has had sent to him, from time to time, material, almost wholly from autopsy, labeled for him by the clinician, as from a case of rheumatoid disease, and he has most naturally found and described very various lesions manifested by one and the same disease. At other times he has described lesions recognized by one set of clinicians under the head of rheumatoid, while some one else, not far away, has described, pretty constantly, another set of lesions, but calling them by the same name; as, for example, rheumatic gout, chronic rheumatism, etc.