

Subastragaloid dislocations are even much more rare than dislocations of the knee, there being in the literature 86 cases. Of these 50 have been inward, 21 outward, 8 anterior and 7 posterior, this making the eighth case of posterior subastragaloid dislocation of the foot to be reported.

CASE 1.—History.—The patient, William W., aged 47, was sent to the hospital July 31 by Dr. K. While the patient was unharnessing a horse in a stable in the country, the animal had become frightened and had run out of the door. In his attempt to catch it, the patient stepped in a ditch, sliding down an incline, throwing his body forward, hyperextending his right leg so that his right foot was turned up on his left thigh. The leg was straightened out and a side splint put on and the patient sent to the hospital. The leg was said to be fractured, and the deformity made the diagnosis appear to be a plausible one without an examination, so the patient was anesthetized.

Examination.—The limb was extended and the lateral axis about normal, but the leg was on a plane anterior to the thigh, and the lower extremity of the femur could be plainly felt in the popliteal space. The quadriceps extensor was lax, the patella was freely movable and seemed to fall back into a large space.

Treatment and Result.—The diagnosis of an anterior dislocation of the knee could readily be made, and the reduction was easily brought about by extension and direct pressure on the femur and tibia, pushing the former forward and the latter downward and backward. A plaster cast from the upper part of the thigh to the foot was applied and allowed to remain on until September 10, a period of six weeks. The cast was then removed, a tight bandage applied, and gradual use of the leg begun. On October 4 the patient was discharged walking normally. A radiograph taken after the dislocation was reduced showed no fracture and the leg in normal position.

CASE 2.—History.—The patient, W. P. B., aged 33, was a brakeman on the Baltimore and Ohio railroad. This man was admitted to the hospital August 29. He had fallen from the top of a freight-car, striking on his feet. He felt the right foot give way, and was unable on account of pain to stand on it after that time.

Examination.—The foot was much swollen, very tender to the touch. The front part of the foot was shortened and showed in the midtarsal region a marked prominence, which was recognized as the head of the astragalus. An x-ray photograph (Fig. 1), showed a dislocation of the astragaloscaphoid joint with the head of the astragalus riding on the upper surface of the scaphoid, and a fracture of the posterior part of the astragalus, probably the external tubercle of the posterior surface to which is attached the posterior fasciculus of the external lateral ligament. Through the neck of the astragalus there was noted an incomplete seam fracture.

Treatment and Result.—Under anesthesia the dislocation was reduced without material difficulty by making direct pressure on the head of the astragalus, and at the same time drawing the anterior part of the foot strongly forward. The foot and leg were then encased in a snugly fitting plaster cast. A second x-ray photograph (Fig. 2) showed the dislocation reduced, and the fracture in satisfactory position. The patient was discharged October 4 with a very satisfactory result.

31 East North Avenue.

The Treatment of Soft Chancre and Its Glandular Complications with Copper Salts.—Almkvist believes that the amidoacetate and lactate of copper have proved themselves more effective in soft chancre and its glandular complications than any other method which can be used in the ambulatory treatment of patients. The copper salts mentioned differ from the copper salts previously tried in this treatment by the fact that they do not precipitate proteins.

EXPERIMENTAL LUNG ANTHRACOSIS

PRELIMINARY NOTE

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The intestinal origin of lung anthracosis was suggested in 1862 by Villaret,¹ but denied in 1885 by Arnold,² who asserted that the small amount of absorption which he had observed following the feeding of charcoal emulsions was not sufficient evidence on which to accept this theory.

In December, 1905, appeared the first of a series of articles by Van Steenburg and Grysez³ of Calmette's laboratory, in which they showed that particles of carbon when injected into the stomach or peritoneal cavity of adult animals were promptly absorbed by the lymph ducts of the mesentery and diaphragm, carried through the thorax to the veins returning to the right heart and finally deposited in the lungs. It was noted that with young animals this result was not obtained.

Following the work of Calmette, Van Steenburg, Grysez, Sommerville⁴ and others, Petit⁵ reported the results of his experiments with six children dying of tuberculosis and other diseases. To these he administered charcoal through a stomach tube and found on autopsy a more or less general anthracosis in the four who suffered from tuberculosis. He concluded that the presence of tuberculous infection rendered the subject especially liable to intestinally borne anthracosis.

On the contrary, Beitzke,⁶ Cohn⁷ and Schultz⁸ repeated the experiments of Calmette and his associates without confirming their results. They found that foreign matter injected into the stomach or peritoneal cavity was, in fact, taken up by the lymphatics, but that it was deposited almost entirely in the liver and spleen. Occasionally, it is true, they observed a pulmonary deposit, but this they attributed to the presence of a spontaneous anthracosis, which occurs in at least 10 per cent. of adult laboratory animals. To this fact or to accidental inhalation during feeding experiments they attributed the results of the French observers.

These contradictory results mean that this subject, so important in considering the origin of tuberculosis and other infections, is still an open one. I have therefore tried to devise methods which should eliminate the errors of former experimenters.

Work with charcoal or any black substance was soon discontinued, as it was found, as Beitzke and others had asserted, that a number of control animals showed the presence of a spontaneous black or gray deposit.

What was needed was a substance, not black, which should be easily recognizable on account of its contrasting color, non-toxic and not affected by the body fluids.

Ultramarine blue, one of the most stable of the blue, green or violet coloring matters, seemed to fulfill these requirements. It is chemically a very inert substance and is affected only by the strongest reagents. No substance resembling it could possibly be present as a spontaneous deposit, and its color is easily recognized on autopsy, which is not true of the red or yellow pigments.

1. Villaret: *Cas rare d'anthracose suivi de quelques, considerations physiologiques et pathologiques*, Paris, 1862.

2. Arnold: *Nebersuchung über Staub-Inhalation und Staub-Metastase*, Leipzig, 1885.

3. Van Steenburg and Grysez: *Ann d l'Inst. Pasteur*, xix, 786.

4. Van Steenburg and Sommerville: *Presse méd.*, xiv, No. 64.

5. Petit: *Presse méd.*, xiv, No. 82.

6. Beitzke: *Source of Anthracosis of the Lungs*, Virchow's Arch. f. Path. Anat., clxxxvii, No. 1.

7. Cohn: *Ber. klin. Wchnschr.*, xliii, No. 45.

8. Schultz: *München. med. Wchnschr.*, liii, No. 35.

This substance was mixed with milk and, after sterilizing, 5 c.c. of the suspension were injected into the peritoneal cavity of guinea-pigs and the animals killed from five hours to twenty-one days later.

On account of the frequent presence of a spontaneous deposit of insoluble matter in the lungs of animals and the uncertainty which on that account might follow a microscopic examination of the tissues, a deposit sufficient for macroscopic recognition was deemed necessary for a definite conclusion.

I shall not in this preliminary notice give all the details of these experiments. The results do not differ materially from those obtained by Beitzke, except that the deposit, the color of which precluded confusion with a natural anthracosis, did not appear to extend beyond the lymph glands.

The blue matter was regularly taken up by the lymphatics of the mesentery and of the diaphragm. The network of glands surrounding the spleen and the liver was heavily loaded, although none could be observed on section of these organs. The diaphragm was within a few hours colored blue and the lymph ducts of the anterior and posterior mediastinum, as well as the glands lying beneath the sternum, were colored blue and could be traced to the root of the neck.

The bronchial glands were in some cases stained blue and in others not. The lungs often showed a peculiar mottled appearance, but this could not be identified as due to the ultramarine blue.

The staining of the bronchial glands may perhaps indicate that the substance has been reabsorbed from the lungs, especially as the larger lymph vessels of the thorax were shown to be conveying the substance to the veins returning to the right heart, but it may also indicate merely that on account of abnormalities in the lymph ducts a closer relationship between the anterior and posterior ducts and the bronchial glands existed in these particular animals.

It was remarkable that, considering the large amount of ultramarine injected, so little could be recognized after it had left the abdomen. It regularly disappeared until finally, except for a few stained bronchial glands and a blue deposit coloring the diaphragm, none could be found.

This may be due to the relatively large dilution of the solid matter by the body fluids or to its rapid elimination or to chemical alteration of the substance after prolonged contact with the body fluids.

I have therefore decided to repeat the experiments, using a stable substance which can not possibly form the basis of a natural anthracosis and which can be easily separated unchanged and recognized.

Talc seems ideal for this purpose. Unchanged by high temperatures and extremely stable chemically, its separation from the organs becomes a matter of merely following out a certain technic and its recognition is simple and absolute.

By injecting weighed amounts of talc into the peritoneal cavity or alimentary canal and later separating the substance from the various organs and excreta by combustion, treatment with acids, etc., the amount of the deposit occurring in the lungs and other organs, as well as the amount eliminated, can be definitely settled. The result of these experiments will form the basis of a later paper.

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A CASE OF OVARIAN PREGNANCY

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The following condition is reported mainly on account of its comparative rarity and to substantiate further the claim made by many authorities that in certain cases of ectopic pregnancy rupturing into the free abdominal cavity the patient may recover if left alone.

History.—On March 27, 1908, was called to see a primipara, who presented the usual characteristic symptoms of ruptured extrauterine pregnancy. She had missed one period. A hot saline enema was given and the patient was removed to St. Joseph's hospital.

Operation.—Four hours later, her condition having improved somewhat, the abdomen was opened under ether anesthesia and found filled with clotted blood, but nowhere were there signs of active hemorrhage. On passing the hand into the cul-de-sac and along both tubes, the only unusual thing noted was that the right ovary seemed to be somewhat enlarged, of soft consistency and collapsible. On bringing the ovary into the wound it was found to be cup-shaped, of about three times normal size and hollowed out from above to the degree that only a thin layer of ovarian tissue remained to form the wall. The cavity within the ovary contained a small clot, after the removal of which slight oozing was noticeable. The ovary was removed on principle, the clots washed out and the abdominal cavity filled with hot saline solution previous to closure.

Result.—The patient made a good recovery and left the hospital within three weeks.

A SUGGESTION FOR MORE READILY DETERMINING INJURIES OF THE URETER DURING OPERATION

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Having within the past year been called on to use the cystoscope on three patients with injured ureters, it occurred to me that the following method might be of assistance in detecting these injuries at the time of operation. The surest method is to pass bougies or catheters into the ureters, but many times this is impracticable, both on account of conditions presented by the patient, and lack of experience on the part of the operator. Often the ureter may be cut, the cut portion inspected, and then there be doubt as to its identity. It is very easy to give a patient methylene blue by mouth before operation, or to inject into the gluteal muscles at the time of operation 20 minims of a 0.4 per cent. aqueous solution of indigo-carmin. These drugs will so color the urine that, should the ureter be cut and there be any leakage from it, the colored solution would be promptly recognized. If the ureter were cut on the distal side of a clamp or ligature, there might be enough discoloration so that it could then be recognized. It is fully realized that many injuries may occur to the ureter in which this procedure would be of no account, but it is so simple, and would at times be of such help, that I think it should be used often.

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Macular and Perimacular Hemianopic Scotoma Following Knife Wound of the Occipital Lobe.—Henschen reports, in *Hygiea Festband*, a case of limited traumatic lesion of the occipital lobe causing a macular scotoma. He holds that the case proves that the macula has a distinct and limited center in the occipital lobe, which center he would designate as a cortical retina.