

TRANSACTIONS
OF THE
PHILADELPHIA ACADEMY OF SURGERY

Stated Meeting held March 13, 1919

DR. G. G. ROSS, Acting-President, in the Chair

SEPARATION OF THE LOWER EPIPHYSIS OF THE FEMUR

DR. HENRY R. WHARTON reported three cases in which the lower epiphysis of the femur had been separated, as follows:

CASE I.—John W., thirteen years of age, was admitted to the Presbyterian Hospital, July 1, 1913, having, twenty-four hours before, fallen from a wagon, injuring the right knee. He was seen by a local physician, who attempted to reduce the deformity at the right knee, under an anæsthetic, but failed. When seen shortly after admission, the region of the right knee was much swollen, and the deformity presented was that of an anterior dislocation of the knee-joint. The joint was fixed in a position of slight flexion, the head of the tibia and epiphysis of the femur being in front of and above the lower end of the shaft of the femur. X-ray examination showed a separation of the lower epiphysis of the femur, the head of the tibia, with attached epiphysis, being in front of the lower end of the femur.

Two attempts, under anæsthesia, were made to reduce the displaced epiphysis without success. The displaced epiphysis then was exposed by a lateral incision on the outer aspect of the knee; this later was supplemented by one on the inner side. A large amount of blood-clot was exposed in the tissues around the seat of injury. By extension and flexion of the knee and the use of an elevator, the epiphysial fragment was with great difficulty restored to its normal position. Fearing a recurrence of the deformity the epiphysis was secured to the diaphysis by a heavy silver wire suture. The wounds were closed without drainage and the limb secured in a posterior splint. Infection of the wound occurred, which required opening of the wound and drainage.

Some days after the reduction had been accomplished it was noticed that the patient had foot-drop, evidently from contusion of the external popliteal nerve. The patient's convalescence was slow, by reason of the wound infection, but he made a good recovery, and when last examined, some three months after the injury, had good motion in knee-joint, aside from slight restriction in flexion. The foot-drop had entirely disappeared.

In this case the reporter said that it was an error to have closed the wounds without drainage, in view of the large amount of blood-clot deposited in the tissues and the contusion of the parts. Fixation of the epiphysis to the diaphysis by suture was unnecessary, as in these cases, when the deformity has been reduced, there is little tendency to its reproduction.

CASE II.—H. D., six years of age, fell down an iron stairway on the Pennsylvania Railroad, and was admitted to the Presbyterian Hospital, March 13, 1918, a short time after the accident. He presented then marked swelling and deformity of the right knee, which on examination proved to be a separation of the lower epiphysis of the right femur, with anterior displacement of the epiphysis and attached head of the tibia. X-ray examination confirmed this diagnosis. The patient was given an anæsthetic, and after somewhat prolonged manipulation the deformity was overcome and the epiphysis restored to its normal position. A moulded binder's board splint was applied to the limb, which extended from the foot to the groin, and in a week, when the swelling had subsided, a plaster-of-Paris splint was applied. The splint was retained for six weeks. After this time passive motion of the knee-joint was practised, and the patient was soon walking without difficulty.

CASE III.—T. G., sixteen years of age, was admitted to the Presbyterian Hospital, July 4, 1918, having a short time before been struck by an automobile, injuring the right knee. The right knee presented a very remarkable deformity. The leg and knee-joint appeared to be drawn inward, while the lower end of the femur above the knee projected outward and was covered by the tightly stretched skin. The rough transverse edge of the lower end of the femur could be felt just under the skin, the injury evidently being an inward lateral displacement of the lower epiphysis of the femur. An X-ray examination showed this to be an inward displacement of the lower epiphysis of the femur, with a limited oblique fracture of the inner edge of the shaft of the femur.

Under anæsthesia by manipulation a fair reduction of the displaced epiphysis was effected. A binder's board splint was applied, extending from the foot to the upper part of the thigh, and when the swelling had subsided at the end of a week, a plaster-of-Paris bandage was substituted. Fixation of the limb was kept up for six weeks, and after this time passive motion was practised, and the patient was encouraged to use the limb. When seen two months after the accident, he had good motion of the right knee-joint.

Doctor Wharton, in commenting on these cases, said that these three cases of simple separation of the lower epiphysis of the femur are the only examples of this injury that have come under his observation. He had seen a number of cases of compound separation of the lower epiphysis of the femur in which the lower end of the femur lacerated the soft tissues, sometimes the great vessels, and was driven through

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the skin. These cases occurred in pre-antiseptic days, and were promptly treated by amputation of the thigh. As he recalled it, the accident usually was observed in boys, who, in attempting to jump on a moving wagon, had the limb caught between the spokes of a revolving wheel. He had no doubt that in these cases at the present time, if the great vessels were not injured, under modern methods of treatment it would have been possible to have had recovery with a useful limb. In all of these cases he had been impressed with the great difficulty in reduction of the displaced epiphysis. In the first case, in which several attempts were made, open operation was resorted to, and even here reduction was very difficult. In examining the X-ray plates for Cases II and III it will be noticed that the reduction of the epiphysis in each case is not perfect, but the functional results are normal.

DR. A. BRUCE GILL raised the question as to the subsequent growth of the bone in cases of separation of the epiphysis in young children. Doctor Haas of San Francisco has published a series of papers on injuries of the epiphysis in relation to the aftergrowth of the bone, claiming that the growth of the bone will be retarded in certain instances. He himself had never seen these cases long enough to know whether separation of the epiphysis in growing children interferes with the development of the bone. In cases of osteomyelitis of the lower end of the radius he had seen deformity develop as the result of defective growth, and likewise in osteomyelitis of the lower end of the tibia.

DR. HENRY R. WHARTON, replying to Doctor Gill's question, said that in quite a number of epiphysial separations in children he had not seen much interference with the subsequent growth of the bone. He had seen some cases in which the epiphyses had been destroyed by osteomyelitis and in these there was marked deformity.

MULTIPLE FRACTURE OF THE PELVIS WITH THYROID DISLOCATION, DISLOCATION OF THE RIGHT FEMUR, DISLOCATION OF LEFT ASTRAGALUS, COMPOUND FRACTURE OF RIGHT TIBIA, LACERATED WOUND OF THE LUMBAR REGIONS

DR. HENRY R. WHARTON reported the following case:

B. B., twenty-five years of age, a brakeman, was admitted to the Presbyterian Hospital on the night of June 28, 1918. He was caught under a moving freight car and sustained the following injuries: Fracture of a large portion of right ilium, fracture of the right ischium, separation of pubic symphysis, thyroid dislocation of head of right femur, compound dislocation of right astragalus, fracture in lower extremity of left tibia, extensive lacerated wound of skin fascia and muscles of the lumbar region.

The patient on admission was suffering from profound shock, so that temporary dressings only were applied. He was put upon

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stimulating treatment, and the next morning still presented the symptoms of profound shock. As he had passed no urine, a catheter was introduced and bloody urine was evacuated. The possibility of rupture of the bladder was considered, but a second catheterization some hours later showed the urine was free from blood, so that the hæmaturia was probably due to contusion of the kidney. As it was considered that he might die at any minute, no attempt was made to reduce the dislocation.

On the third day after admission, as the patient had reacted somewhat, he was etherized and the dislocation of the femur was reduced by manipulation, also that of the left astragalus, and his fractures were dressed. The patient had a slow convalescence. The pelvic fractures were dressed with difficulty on account of the extensive wound in the lumbar region.

He was finally discharged from the hospital October 6, 1918, and is now able to walk quite well, although his gait has been changed by the deformity resulting from the pelvic fractures.

RHINOPHYMA

DR. JOHN H. GIBBON read a paper with the above title.

EMPHYEMA

DR. JOHN STEWART RODMAN read a paper detailing observations in empyema made at Camp Bowie, Texas, for which see page 49.

DR. JOHN H. GIBBON said that military experience has advanced surgery, especially in the surgery of joints and of the chest. There is nothing about which he could speak more enthusiastically than of the sterilization and closure of the pleural cavity by the use of Dakin's solution. The first discussion he had heard of this work was by Tuffier, who reported 26 cases of infection of the pleural cavity with only four due to pneumonia, the others being due to gunshot wounds. All were sterilized under Dakin's treatment and closed. This should answer any question concerning the efficacy of the Dakin treatment. If one can sterilize the chest cavity and close it regardless of a big dead space underneath, one can say that whatever has been used it is the right method. They found that a great many of these wounds did not need closure but closed themselves. Doctor Rodman did not refer to the fact that a certain proportion of wounds reopen. This does not mean, however, that the wound has not been sterile. They had had gunshot wounds reopen after having been closed for two or three weeks, but the fluid was absolutely sterile in every one. Local anæsthesia should be employed and if the technic is properly developed the operation is not a painful one. When hemorrhage occurs the Dakin's solution has not been properly used. The agent does not encourage hemorrhage. In the American evacuation hospitals they had many large open wounds, but secondary hemorrhage was unusual

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because the cases were clean and had been sterilized by Dakin's solution. Secondary hemorrhage is the result of infection.

DR. D. L. DESPARD, in connection with the sterilizing power of Dakin's solution, reported a case of long standing, that of a man operated on for empyema eighteen or twenty months prior to coming under his care. The man had a persisting suppurating sinus into which a probe could be passed for six or seven inches; he also had a persistent daily rise in temperature from 99° to 100° every afternoon. The opening was small, but a rubber tube a quarter of an inch in diameter could be inserted into the bottom of the sinus, and the patient, being a druggist, made his own Dakin's solution and injected it himself. In a month the purulent discharge had ceased; the tube was kept in for a week or ten days longer and then removed. He has had no temperature for several weeks and apparently the cavity is entirely closed.

DOCTOR RODMAN said that notwithstanding anæsthesia is regarded as being unsafe in these cases, he had never been able to resect ribs without some pain, even if infiltration and anæsthesia with novocaine were carefully done and the intercostal nerves blocked. Therefore, he had preferred at this stage of the operation light general anæsthesia, preferably using gas-oxygen. Again he agreed with Doctor Gibbon that if the Carrel technic of using Dakin's solution is correctly applied bleeding is not likely to occur—Dakin's solution in the proper concentration (.5 per cent.) will not dissolve healthy tissue, having a selective action on necrotic tissue. If the blood-vessel is necrotic there is no reason to believe that it will escape, but this chance is worth taking for the marked benefit to be derived in getting rid of necrotic tissue and infection in general.

Dichloramine-T has not the solvent effect that Dakin's solution has and for that reason is not as valuable as a sterilizing agent. In his opinion it cannot be compared with Dakin's solution in sterilizing quickly large infected cavities. Dichloramine-T is valuable but chiefly so in small surface wounds.

UNILATERAL TUBERCULOSIS OF THE KIDNEY

DR. J. LEON HERMAN (by invitation) read a paper with the above title.

DR. JOHN H. GIBBON said that one troublesome aspect in renal tuberculosis is that there are cases in which it is difficult to be absolutely sure that there is a good kidney on the other side. About fifteen years ago exposure of both kidneys was urged by Leonard Freeman in doing nephrectomy, to determine whether tuberculosis was present in the supposedly good kidney. In one case operated on twelve years ago in which catheterization of the ureters was not possible both kidneys were exposed, and one found to be perfectly normal. The man made a good recovery and has remained well, except that he had tuberculous necrosis

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of costal cartilage two years later. In another patient in whom the testicle had been removed for tuberculosis, blood in the urine led to the suspicion of tuberculosis of the kidney. Operation was not submitted to and the man later had an attack of great pain, passing clots down the ureter. The bladder was opened by suprapubic incision by another surgeon, and in that case there was a question which kidney was involved, although the symptoms clearly pointed to the right side. Repeated attempts to catheterize the ureters failed. There was, therefore, nothing left to be done but to expose the kidneys. This was done, exposing the supposedly good kidney first. A small fluctuating area in this kidney was incised and a stream of tuberculous pus escaped. This little abscess had no connection with the urinary tract. The abscess was excised. The other kidney was removed. This has been five years ago, and, while the man may not be called well, he has never developed tuberculosis of the remaining kidney. The interesting feature about this case is that had they been able to catheterize the ureters they would not have learned of the presence of the abscess found in the supposedly good kidney, which was not indicated in any way. Both of these patients were physicians and both are now carrying on an active practice.

Stated Meeting held April 7, 1919

DR. GEORGE G. ROSS, Acting-President, in the Chair

CERVICAL MENINGOCELE

DR. JOHN STEWART RODMAN presented a case of cervical meningocele which had been relieved by plastic operation.

DR. JOHN B. ROBERTS called attention to the fact that the free flap which Doctor Rodman had used was a graft of fatty fascia from underneath the skin, containing also a portion of tendon of the frontalis above the nose. When the protrusion of cicatricial dura and scar tissue was removed, there was exposed a pit three-quarters of an inch deep with a cranial opening about one inch long and half an inch wide, with the long axis horizontal. Some time ago he took a bone plate out of the girl's tibia and planted it in her right thigh under the fascia lata. This he intends to use later to close the defect in the bone of the cranium, if the tendinous fatty graft recently stitched across the opening fails to prevent protrusion of the cerebral membranes. His idea is to use the fascia lata which was fastened by wire to the bone graft as a patch for the dura mater deficiency.

WAR WOUNDS TREATED WITH DICHLORAMINE-T

DR. PENN G. SKILLERN, JR., read a paper with the above title, for which see vol. Ixix, p. 498.

DR. J. STEWART RODMAN said that he had had a rather unusual opportunity to watch the use of dichloramine-T at General Hospital No. 14 during