

the latter. Chloroform was given and Dr. Ferguson proceeded to do a modified Furneaux Jordan's operation, by sawing the femur off at the circular incision before attempting to dissect out the upper extremity of the bone. Hemorrhage was controlled as well as possible by Jordan Lloyd's method, besides both hands grasping the thigh tightly. As large blood vessels were cut they were caught and tied as rapidly as possible. There was pretty copious hemorrhage. The operation was completed within  $\frac{3}{4}$  of an hour and the patient removed to his bed. Hot bottles were applied to the body and extremities and stimulants given freely. He came out of the anaesthetic for a short time when he rapidly sank into a comatose state and died from shock about six hours after the operation. On examining the femur the periosteum was found about  $\frac{1}{2}$  inch thick and the growth extending from it into the surrounding muscles, the bone itself was honey combed superficially.

CASE 2—A. McC——, aged 30, married, was admitted to the Winnipeg General Hospital, July 14th, 1890, under Dr. Ferguson complaining of a tumor on the left hip. The patient's previous health had been very good and there is no family diathesis. The history of the case is somewhat obscure as the patient met with an accident about 8 years ago, having been thrown from a buggy, and receiving a comminuted fracture of the leg. During the same year she noticed her thigh stiff on bending forwards. This stiffness gradually increased and for the last three or four years she has suffered more or less pain about the thigh. About a year ago she first noticed a distinct tumor at the upper and outer part of the thigh. This growth has gradually increased in size since. The patient has suffered considerable pain, of a dull heavy character in the thigh since then and has become very much emaciated. At present she is pale and the skin gives a suspicion of cachexia nutrition poor, pulse 80 regular and full; temperature 98° to 100° F.; bowels regular, urine normal. There is a large tumor involving the upper third of the left thigh which is most pronounced at the anterior and outer surfaces. And

extends from the junction of the upper and middle thirds of the thigh nearly to the crest of the ilium; laterally from the middle of the groin in front to the great trochanter behind.

The tumor is smooth and uniform on its surface and its boundaries apparently well defined. The skin covering it contains a plexus of dilated veins; no adhesions exist between it and the tumor. It is hard and resisting above but soft and semi-fluctuating below and at the outer side. There was no evidence of secondary growth in any of the serous viscera.

July 15: Chloroform was given and an incision about five inches long was made over the outer surface of the tumor when a large cyst cavity was opened which was found to contain masses of gelatinous material together with new bone formation. The upper extremity of the femur was found extensively eaten into and very soft, so that a good part of it readily came away by aid of an ordinary table spoon. The cavity was packed with iodoform gauze and the thigh sutured and dressed antiseptically. Parts of the tumor being examined microscopically it was found to be of the nature of mixed celled osteosarcoma with cystic degeneration.

July 21: Dr. Ferguson decided to operate to-day. The patient took a hearty breakfast and a light dinner. Later on she was given an enema of brandy and peptonised milk and before the operation a hypodermic of morph. sulph. and atropine was given. Ether was given and the leg prepared. All the blood of the extremity was driven into the body by an Esmarch's bandage and hemorrhage was guarded against by Jordan Lloyd's tourniquet, also an assistant endeavored to control hemorrhage by means of both hands grasping around the thigh tightly. The large vessels were caught and ligatured as soon as possible. The operation was performed very rapidly and the amount of hemorrhage was small.

The stump being dressed she was removed to a warm bed and given stimulants by hypodermic injection freely, but died from shock 2 $\frac{1}{2}$  hours after the operation; first having only rallied very