

ROYAL NAVAL HOSPITAL, CAPE OF GOOD HOPE

REPORT OF TWO CASES OF CAPITAL OPERATIONS BY STAFF SURGEON-IN-CHARGE, JOHN BERNARD, R.N., 24 MAY 1873

CASE I

Necrosis of the lower third of the right femur, with destruction of the knee joint. Amputation of the thigh. Recovery.

History

William Nash, about 20 years of age, Ordinary Seaman, H.M.S. 'Narcissus', and of a scrofulous constitution, was sent from his ship to the military hospital, island of Mauritius, on 5 June 1872 for disease of the right femur and knee joint. On 10 September he was discharged from the military hospital, island of Mauritius, to H.M.S. 'Himalaya', and by her conveyed to the Royal Naval Hospital, Cape of Good Hope, where he was admitted on 25 September 1872.

Condition on Admission

25 September. On admission the right knee joint was greatly enlarged and fluctuation could be distinctly felt in it. About 4 inches above the joint on the inner side of the thigh, there was a sinus which discharged thin pus freely and which led down through a large cavity to bare bone, at the lower part, and to roughened bone at the upper part. The patient was greatly emaciated and there was hectic fever.

A few days after admission an incision was made into the knee joint which gave exit to a considerable quantity of pus mixed with synovial fluid. The joint and the sinus which led down to the diseased bone were well syringed with solution of carbolic acid (1 in 60). The patient was placed on as good a diet as his stomach was capable of retaining.

2 October. In consultation today it was decided to amputate the limb as the only means of saving the patient's life, it having become daily more evident that, owing to the increased discharge of pus, and hectic fever, death must ensue if any further delay occurred in trying to save the limb.

The operation by means of an anterior and posterior flap at the junction of the upper and middle third was accordingly performed this day under chloroform. Solution of carbolic acid in water was applied to the flaps by syringing during the operation. The flaps were brought into apposition and retained *in situ* by silver wire sutures, scraped lint steeped in solution of carbolic acid being applied around the edges of the flaps.

18 October. The patient has progressed in a most satisfactory manner since the operation, no unfavourable symptom having occurred — all the ligatures came away this day. The flaps have united by 'the first intention' in all their extent except at the inner and upper angle through which the ligatures protruded. His general health is greatly improved, and he is allowed to get up.

15 November. The stump is quite healed. The patient's general health is re-established and he has been going about on crutches for the last fortnight. He was invalided this day.

24 April 1873. Discharged to H.M.S. 'Barrosa' for a passage to England.

Examination of the Diseased Limb

On examination a large cavity containing pus was found in the lower and back part of the thigh and popliteal space. This communicated with the knee joint behind the posterior ligament. The lower extremity of the femur was denuded of periosteum for about 4 inches and was of a dirty green colour above the inner condyle. Above this the bone was roughened and in a carious state. The tissues (*sic*) around the knee joint were thickened, the cartilages ulcerated, and the inner condyle of the femur in a carious state. The inner side of the head of the tibia was bare exposing the cancellous (*sic*) tissues. The leg was oedematous.

CASE II

Necrosis of the left humerus with disease of both shoulder and elbow joints. Amputation at the shoulder joint. Recovery.

History

George Davis, about 21 years of age, Ordinary Seaman, H.M.S. 'Glasgow', was sent from his ship to the military hospital, island of Mauritius, on 4 July 1872 for acute inflammation of the left shoulder joint followed by suppuration and

caries of the bone.

On 10 September he was discharged from the military hospital, island of Mauritius, to H.M.S. 'Himalaya' and by her conveyed to the Royal Naval Hospital, Cape of Good Hope, where he was admitted on the 25 September 1872.

Condition on Examination

25 September. On admission several sinuses copiously discharging pus were observed leading down to dead bone, both on the anterior and posterior aspects of the arm. Both shoulder and elbow joints were found to be extensively diseased, and the forearm and hand were oedematous and livid. There was much emaciation and hectic fever.

7 October. It was determined in consultation to amputate at the shoulder joint as the only means left to save the patient's life. This operation was accordingly performed this day under chloroform, an external flap being made by dissecting up the deltoid, then disarticulating and forming an internal flap. Owing to the head of the bone being found separated at the surgical neck from the shaft, it had to be carefully dissected out, without the advantage of the arm being used as a lever.

About 3 hours after the operation, while the patient was retching and vomiting, violent haemorrhage occurred from the stump. The subclavian artery was at once controlled by means of a rag (*sic*) and the stump opened and a ligature applied to the bleeding vessel, a branch of the circumflex, which had been twisted during the operation. The flaps were well syringed with a solution of carbolic acid in water and brought into apposition and retained *in situ* by silver wire sutures; lint steeped in the same solution being applied around the edges.

25 October. The patient has progressed favourably since the operation, the flaps are almost entirely united by 'the first intention', but there is a glazed and inflamed appearance at the end of the internal flap where fluctuation is distinct. His strength and general health are much improved. An incision was made into the abscess and exit given to a quantity of pus. The opening was freely syringed with carbolic acid in water and dressed with lint steeped in the same solution.

31 October. The patient has progressed most favourably since the last report. The abscess is quite healed. The flaps, excepting a small portion on the anterior part where the ligatures protruded, are united by 'the first intention'. Some of the ligatures came away yesterday, and the remainder have come away today. The patient's general health is re-established and he is able to get up and walk about.

15 November. The stump is quite healed. The patient was brought forward for survey this day and invalided.

24 April 1873. Discharged to H.M.S. 'Barrosa' for passage to England.

Examination of the Diseased Limb

The head of the humerus was found separated from the shaft at the surgical neck. There was a cavity about the size of a filbert in the head, which was carious externally.

On being sawn perpendicularly, the shaft was found to be dead and partly detached from the new bone which had been thrown out around and enclosed it. The elbow joint was found extensively diseased, and the heads of the radius and ulna were affected.

POSTSCRIPT

The reports of the two operations performed at the Royal Naval Hospital, Simonstown, in 1872, are of great interest as far as the history of medicine in this country is concerned. The owner of the manuscripts is Mrs. R. E. H. Amman, (née Bernard) of St. James, Cape, who is a granddaughter of Dr. John Bernard. The manuscripts were brought to the attention of Prof. J. H. Louw, Professor of Surgery, University of Cape Town, (who submitted them for publication in the *Journal*) by Mr. H. C. Willis of Simonstown. Mr. Willis received them on loan from the Simonstown Historical Society. The information about the surgeon, John Bernard, was obtained from

his various medical certificates and extracts from a publication *The Bernards of Kerry* by G. H. Bernard (University Press, Dublin, 1932).

John Bernard belonged to a family which produced several naval surgeons, some of whom achieved a very high rank. His father was a naval surgeon and so were two of his older brothers, Robert and Sidney. His father, also John Bernard, received the M.D. degree at the University of Edinburgh in May 1817. He died in 1851.

His brother, Robert, was greatly impressed by Lister's antiseptic treatment of wounds and made a special study of the technique in London hospitals. It is believed that he was the first to introduce Lister's method into naval hospitals, and his work in this connection attracted much attention when he was appointed head of the surgical side of the Royal Naval Hospital at Stonehouse in 1868. In view of the fact that he was responsible for spreading Lister's doctrines in Royal Naval hospitals throughout the world, it is of interest that he died of septicaemia following an infection of his finger in 1872.

A cousin, Sidney Bernard, was also a naval surgeon and was actually assistant surgeon at the Cape in 1844, when he served in H.M.S. 'Melville Castle'.

John Bernard was born in 1823. He received his medical education in Dublin, obtaining his various certificates from the Royal College of Surgeons of Ireland between 1837 and 1841. At the age of 18 years he became assistant surgeon in the Royal Navy in October 1841. He seems to have been at the Cape *circa* 1865-1873 or 1870-1875, when he was appointed Deputy Inspector General and later Inspector General. He was naturally greatly influenced by his older brother's teachings on antiseptic surgery and it would appear that the two successful operations, which have been so carefully documented, were the first to be performed in South Africa according to Lister's methods. In this connection it is interesting to note that Lister's paper on antiseptics was published in 1867, i.e. 5 years before these operations were performed.