

HISTORICAL ORTHOPAEDIC ARTEFACTS FACT SHEET No 8

The Tulloch Brown Loop

The Tulloch Brown Loop or U-Loop Tibial Pin Traction and Suspension was named after James Tulloch Brown FRCS (1915-2014), an Orthopaedic Surgeon working at the Glasgow Western Infirmary and was first described in 1951.



It was originally designed for the management of patients who had had a cup arthroplasty or pseudoarthrosis operation or who had sustained a fracture of the shaft of the femur (thigh bone). It was not used in children.

A cup arthroplasty is the surgical replacement of the head of the femur by a metal or plastic mould to relieve pain and increase motion in arthritis or to correct a deformity. A non-union is a permanent failure of healing following a broken bone unless intervention (such as surgery) is performed. A fracture with non-union generally forms a structural resemblance to a fibrous joint, and is therefore often called a “false joint” or pseudoarthrosis”.

The Loop was attached to a Steinmann pin which was inserted through the tibia (shin bone). The Steinmann Pin is a rigid steel pin with a 4-6 mm. diameter.

The Tulloch Brown Loop was slipped over the ends of the pin and the tibia supported. Orthopaedic surgeon K.I. Nissen designed a support for the foot and a special stirrup that enabled the leg to be suspended, which prevented the leg from moving away from the midline of the body.

This apparatus is no longer used.

Sources

1. Nangle, EJ. Instruments and apparatus in orthopaedic surgery. Blackwell, 1951, p 13, 85
2. Powell, M. Orthopaedic nursing. 6th ed. Livingstone, 1968, p 74
3. Roaf, R & Hodgkinson, LJ. The Oswestry textbook for orthopaedic nurses. Pitman, 1963, p 186
4. Robinson, PM & O'Meara, MJ. The Thomas Splint: its origins and use in trauma. Journal of Bone & Joint Surgery vol 91B 2009, p 540-544