



Supplementary Material

10.1302/2046-3758.107.BJR-2021-0146.R1

Surgical technique

Femoral intramedullary lengthening nail insertion

Patients were placed in a supine position on a traction table for intramedullary lengthening nail (ILN) implantation in minimal invasive technique and intravenous antibiotics were given preoperatively. All nails were implanted via a lateral trochanteric entry. Corticotomy was performed by a multiple drill-hole technique (4.5 mm drill) with subsequent cortical chiselling. Concomitant release of the iliotibial band was never conducted. Correct function of the ILN was controlled intraoperatively by fluoroscopy and lengthening of 1 mm.

Tibial intramedullary lengthening nail insertion

All nails were inserted via a suprapatellar approach according to the same principles as for femoral ILNs. Patients with an increased risk to develop ankle equinus contracture received additional temporary extra-articular screw arthrodesis.

Postoperative protocol

The latency period was seven or ten days for femoral and tibial distraction, respectively. Distraction was started with 1 mm/day for the femur and 0.66 mm/day for the tibia. According to the manufacturer's recommendation, full weight-bearing was allowed under distraction. The patients were followed every two weeks during lengthening. Once the lengthening goal was achieved, a consolidation period of six weeks was initiated. Physiotherapy was prescribed at least once a week during lengthening. After an uncomplicated course of treatment, patients were scheduled for routine nail removal one year postoperatively.