



Valgus Intertrochanteric Osteotomy with Single Angled 130° Plate Fixation for Fractures and Non-Unions of the Femoral Neck.

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Abstract:

Non-union of femoral neck fractures may occur due to mechanical and biological factors. Valgus intertrochanteric osteotomy (VITO) alters hip biomechanics and enhances fracture union. The double-angled 120° plate is usually used for internal fixation of the osteotomy. It allows the osteotomy to heal with medialisation and verticalisation of the femoral shaft. This deformity causes medial ligament strain of the knee joint, genu valgum and ultimately osteoarthritis. This work presents our experience in treating vertical fractures and non-unions of the femoral neck by VITO and fixation by a single-angled 130° plate. Thirty-six patients presented with 19 recent vertical femoral neck fractures, and 17 non-unions were included. They were 26 men and ten women, and their ages averaged 37 years. Preoperative planning and VITO technique are described. Union was achieved in 35 patients (97%), and one recent fracture failed to unite (3%). Time to fracture union averaged four months in recent fractures and eight months in un-united fractures. All patients with united fractures had an almost normal configuration of the upper femur. Avascular necrosis of the femoral head was reported in five patients. Twentytwo patients (61%) were pain free, nine (25%) had hip pain on lengthy walks and the remaining five (14%) had persistent pain. Preoperative limb shortening averaged 2.5 cm, and post-operative shortening averaged 0.5 cm. We recommend VITO and fixation by a single-angled 130° plate for vertical femoral neck fractures and non-unions in relatively young adult patients.

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