HTO

Treatment system for opening wedge high tibial osteotomy

The easy to use instruments are specifically designed for the implant and give you the option of minimally invasive surgery.
The small anatomical plate design promotes bone regrowth in the osteotomy gap, whilst still providing adequate stability to maintain the correction permanently, in combination with the angle stable screws and the selection of spacer blocks. The OPTA HTO plate can stabilize even very large osteomies thanks to its length and its additional screws.
A minimally invasive operating technique causes significantly smaller scars, which,together with the flat plate design, makes convalescence easier for the patient.

Indication

A patient who can be considered for high tibial osteotomy experiences localized, loaddependent pain on the inside of the knee, which often occurs during sporting activity but which ideally disappears again in rest periods. An arthrotic alteration in the medial compartment should be clearly identifiable on the patient X-ray, with the lateral compartment showing no major defects.

- Unicompartmental arthrosis with varus deformity of the leg axis
- Varus deformity < 10° with stable ligaments
- Up to 65 years of age, depending on activity level
- Minimum ROM 0-120°
- Preferably not significantly overweight
- Extension deficits must be taken into account and compensated for in the osteotomy planning
- Correction up to 10°

1.Approach

The approach is through a skin incision distal to the proximal medial tibial plateau. The OPTA HTO plate must be implanted into the bone. To do this, the pes anserinus must be lifted off far enough to allow the plate to lie underneath it. Alternatively, it may be severed sharply and sewn up again over the implant after the operation. The tibial head must be freed far enough in a dorsal direction so that the soft tissue protector can be safely pushed behind the tibial head bone.

2.Inserting the K-Wires

The ø 2.0 mm K-wires are inserted into the tibia using the drill guide.The drill guide presets the insertion angle of 10° rising towards the fibular head.

3.Resection

3-1. The drill guide is removed after insertion of the K-wires.
The implanted K-wires serve as a resection guide, as well as providing stabilization for the proximal tibia head to prevent a fracture.

3-2. The inserter can be screwed on to the resection block and used as a handle.
The resection block can then be pushed toward the tibia using the K-wires.

3-3. The slot in the resection block serves as a guide for the resection blade.
Before repositioning, the soft tissue protector is pushed behind the tibia to protect the dorsal vascular structures.
The resection blade is inserted into the resection slot. The tibial osteotomy is performed underneath the K-wires to avoid infraction of the tibial head.
An osteotomy can also be performed on the tuberosities.

4. Define wedge height

The chisels are then removed and the gap is opened to the required height and held in position with the retractors.
The trial spacer blocks can be used to check the correction that has been achieved and to define the height of the spacer block required.
To do this, the trial spacer block is inserted into the opened osteotomy gap.

5.Implantation

5-1. The implantable spacer block of the height defined by the trial spacers is screwed onto the inserter and introduced into the osteotomy gap.
If the gap height does not exceed 10 mm, it is not essential to fill the gap with additional bone material.

5-2.The HTO plate is applied to the bone and connected to the spacer block with the fixing screw. To do this, the fixing screw is inserted through the long screw slot in the HTO plate and tightened slightly.At this point, the position of the plate can still be altered rotationally or in a proximal or distal direction. As soon as the required position has been achieved, the screw is securely tightened using the screwdriver.

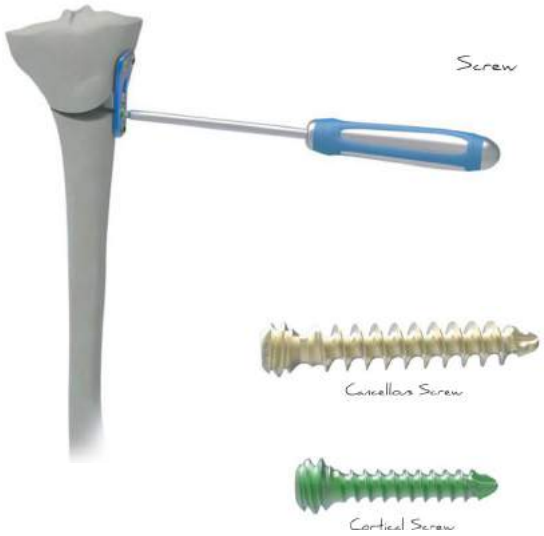
5-3. In preparation for implanting the screws, the drill sleeve is first attached to the OPTA HTO plate and the borehole is then pre-drilled using the drill.

5-4.After pre-drilling, the required screw length is determined using the correctly-sized drill or the screw depth gauge.

5-5. The screw is then implanted with the self-holdingscrewdriver.
This process is repeated until all the cancellous and cortical screws have been implanted. It must be ensured that the direction set by the drill is followed.

6.Wound Closure

After successful implantation of the OPTA HTO plate, the pes anserinus is sewn together over the implant and the wound is subsequently closed.



7.Therapy Plan

Weight bearing

•6 weeks partial weight bearing at 20 kg
•Increased weight bearing after X-ray assessment

Range of movement/ ROM-splint

•Adjustment in ext/flex (0/0/40) on discharge
•After removing the sutures in ext/flex (0/0/70)
•After 4 weeks in ext/flex (0/0/90)
•Always fix the ROM-splint in the zero position at night

Extent of movement

•During physiotherapy (2 x weekly), the extent of movement for the knee should be ext/flex (0-0-90)

Physiotherapy

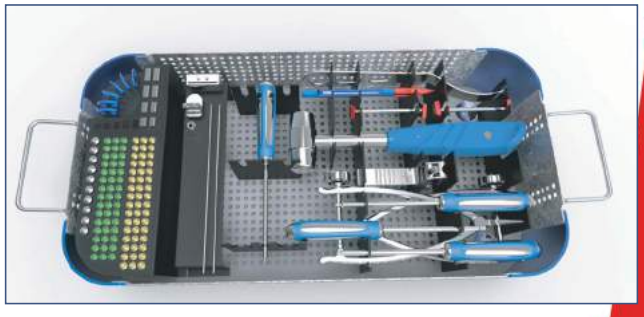
• Weeks 1-6:
Move the knee within the permitted extent of movement
2 x weekly – patella mobilization
As soon as full weight bearing is permitted, the patient should stop using walking sticks and weight bearing should be increased slowly

•From Week 8:
if necessary, additional exercises to strengthen the muscles using equipment (physiotherapy equipment) or continue out-patient physiotherapy

The therapy plan must always be implemented in close association with regular X-ray assessment.

The therapy plan given here is intended to be an example and should always be monitored and defined in accordance with the individual situation

OPTA HTO Standard Tray Layout



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