Introduction

Metatarsalgia is a fairly common condition involving pain in the metatarsophalangeal joints during weight-bearing.

Objective

To perform osteosynthesis with EZ Weil screw by:
- Classic Weil technique,
- DMMO percutaneous technique.

Surgical technique

1. Surgical approach
   An incision is made at the metatarsophalangeal joint (photo 1) with a MIS surgical blade (ref. 254 327 + 266 510).

2. Bone osteotomy

   Classic Weil technique
   • The osteotomy, performed with an oscillating saw, begins at the junction of the dorsal cartilage. The line is as horizontal as possible with elevation obtained through the thickness of the blade or better still through resection of a slice of bone.
   • The head is moved backward according to the pre-operative programme. Reduction in a good position is maintained manually with the toe flexed. The backward movement of the head, any potential lateral shift and good contact between bone surfaces are carefully controlled.

   DMMO percutaneous technique
   • The end of the 2.0 x 20 mm Shannon burr is inserted distally and its position in the metatarsal axis is checked using a fluoroscope image intensifier (photo 2).
   • The cut is started, checking the planter point where the burr exits. The line of metatarsal osteotomy must be horizontal to make this osteosynthesis possible (horizontal cut - below).

   • The position of the screw is determined using the fluoroscope (photo 3).
3. Fixation

**Classic Weil technique**
The site of insertion of the EZ Weil® screw is prepared using the Ø2mm drill ref. 266 818, which makes a starter hole through the cortical and spongious bone.

**DMMO percutaneous technique**
The entry hole is realized for the EZ Weil® screw using the Shannon burr ref. 264 425, which will stabilise the DMMO (photo 4).

**For both techniques**
The EZ Weil snap-off part is positioned manually on distal extremity of the screwdriver ref. 265 770, then final screwing is completed manually until the head of the screw will be in contact with cortical bone.

*Warning: after screwing, the snap-off part remains inside the screw tip.*

**Tips & Tricks: snap-off part of the screw**

1. Screwing position: the head is totally included inside the screwdriver.
2. Pull the screwdriver until the collar of the snap-off part is in touch with the blades of retention.
3. Tilt the screwdriver until the break of the snap-off part.
4. To extract the snap off part, the use of the removable head screwdriver, introduced into the screw tip and the gripper is then expelled through the window provided for this purpose.

**Recommended postoperative protocol**

- Discharge day 0 or day 1.
- Immediate weight-bearing using a flat, rigid-soled shoe for 3 to 4 weeks.
- Anticoagulation is not routinely required. Analgesics as required.
- 1st follow-up visit on the 15th day with replacement of the dressing and fitting of a simple strap that does not compress the forefoot but permits showering.
- Work can be resumed from the 2nd week, sport after 2 to 3 months.
- Radiological consolidation should be observed between the 1st and 3rd month.

**Instruments**

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Ref.</th>
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<tbody>
<tr>
<td>EZ WEIL SCREWDRIVER</td>
<td>265 770</td>
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<tr>
<td>Ø2mm DRILL</td>
<td>266 818</td>
</tr>
<tr>
<td>EZ WEIL ANCILLARY</td>
<td>266 253</td>
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</tbody>
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**Instruments**

- **EZ WEIL kit**
  - EZ WEIL SCREWDRIVER ref. 265 770
  - Ø2mm DRILL ref. 266 818
  - EZ WEIL ANCILLARY ref. 266 253

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