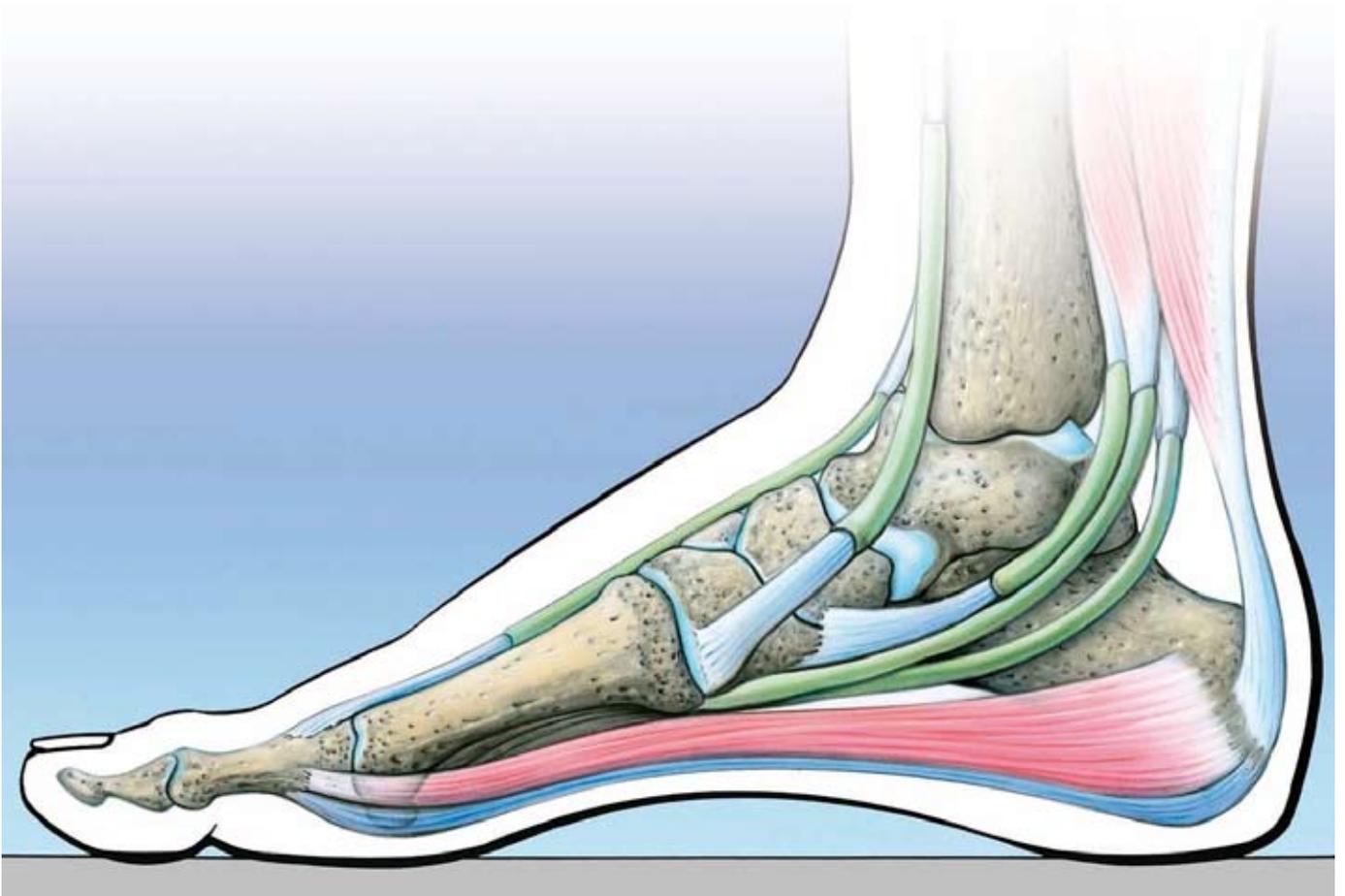


Surgery of the foot and ankle

Informations for patients of Dr. med Alex Pellegrino



Introduction

In the last years there has been an important development in the surgery of the foot and ankle. A few years ago mainly resective procedures were performed, leading to important losses of normal biomechanics. Today, thanks to specialization and new insights, we are able to preserve most joints with modern and minimal-invasive procedures.

Injuries of the foot and ankle are often underestimated and can lead to long-term complaints. We strive for the treatment of acute lesions and also of chronic, following lesions. These are lesions of bones, cartilage, tendous and ligaments. We also perform joint-replacing procedures (e.g. ankle-joint prosthesis) in case of arthritis. Another focus is the correction of malalignements and deformities of foot and ankle.

The percutaneous or MIS (Minimal Invasive Surgery)-foot surgery is a surgical procedure to treat all pathologic elements of foot-deformities (Hallux valgus, Hammertoes, Metatarsalgia, Morton-Neuroma, Tailor's bunion, Calcaneal Spur etc.) using small incisions of less than 2 mm.

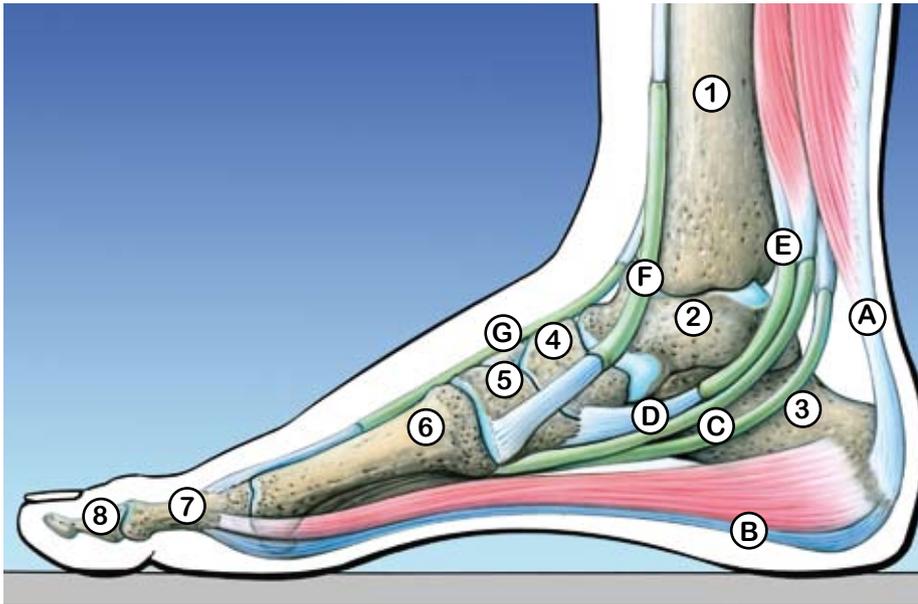
Generally speaking, the less aggressive the approach to the soft tissues and bones, the easier and shorter the postoperative rehabilitation. The minimal-invasive foot-surgery was started 30 years ago in the United States: today it is largely standardized and widespread in Spain and France.

This brochure is an introduction to foot and ankle surgery, for further informations please consult our homepage www.etzelclinic.ch



Dr. med. Alex Pellegrino

Anatomy



Legende

- 1 Tibia
- 2 Talus
- 3 Calcaneus
- 4 Naviculaire
- 5 Medial Cuneiform
- 6 First Metatarsal
- 7 Proximal Phalanx I
- 8 Distal Phalanx I

- A Achilles Tendon
- B Plantar Faszia
- C Long flexor of the Hallux
- D Long flexor of the lesser toes
- E Posterior Tibial Tendon
- F Anterior Tibial Tendon
- G Extensor of the lesser toes

Regional Anesthesia



Minimal-Invasive Surgery (MIS) of Hallux valgus

Hallux valgus (or "Bunion") is a frequent forefoot-deformity that concerns mainly women. The primary causes are multiple: genetic hypermobility or splayfoot, trauma, neurological disease, systemic disease as gouty or rheumatoid arthritis.

Footwear, although not a primary cause, can aggravate the symptoms of the deformity.

A lateral deviation and rotation of the hallux towards the lesser digits and a medial deviation of the first metatarsal resulting in the "bunion" deformity of the first metatarsophalangeal head characterize the Hallux valgus-deformity. This causes not only an esthetic deformity, but has also considerable consequences with regard to static and function of the foot.

The indication for a corrective surgical procedure is based mainly on the pain and the symptoms suffered by the patient.

Minimal-invasive surgery is a method among others; your surgeon must pose the indication for the specific procedure after careful evaluation of precise clinical and radiographic criteria. In fact, not every Hallux valgus-deformity is suitable for the minimal-incision technique. Nevertheless, the percutaneous procedure has stood the test of time and has revolutionized the correction of Hallux valgus, limiting the surgical aggression and cicatrices to a minimum, reducing the post-operative pain, permitting immediate ambulation, and allowing early return to productive activities.

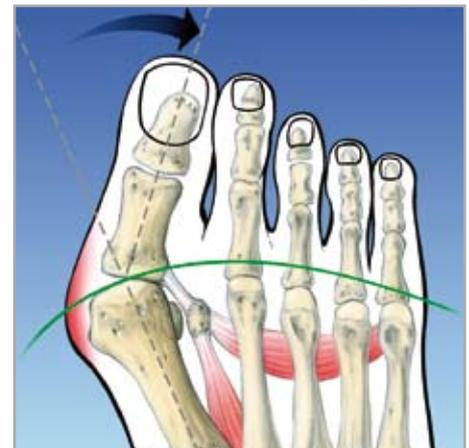
No surgical procedure is completely risk-free, even when complications are uncommon in this minimal-invasive technique: venous thrombosis, infection or irritation of the skin incisions, paresthesia often of temporary nature only, rigidity of the metatarsophalangeal articulation, delayed union of the osteotomies, under- or overcorrection.

The preoperative consultation with your surgeon permits to evaluate the state of your foot. Therefore it's necessary to make proper weight-bearing radiographs.

When the surgical procedure is determined, the anesthetist will evaluate your general state of health (allergies, medications, history, etc.) and discuss the modalities of the anesthesia. In most cases a loco-regional anesthesia will be planned, because it permits to suppress all sensibility and pain until the day after the operation.



Hallux valgus radiologically



Hallux valgus schematically

The hygienic state of the foot must be flawless, in order to minimize the risk of wound infection.

The surgical procedure itself lasts less than one hour.

1. Exostosectomie

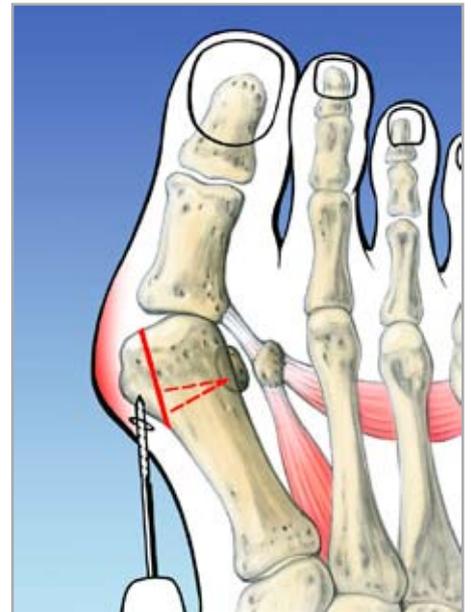
Resection of the medial eminence ("Bunionectomy")



Fluoroscopy before resection



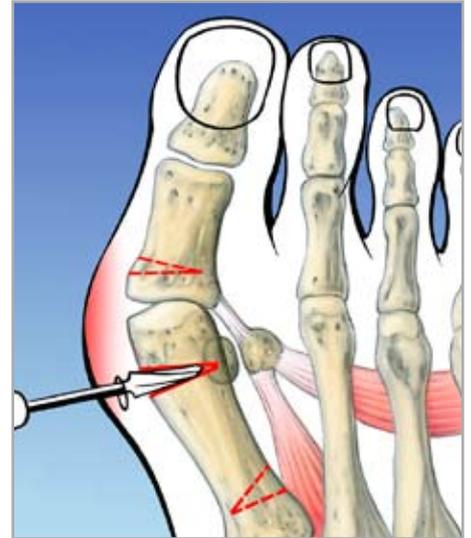
Fluoroscopy after resection



MIS-Resection of Exostosis

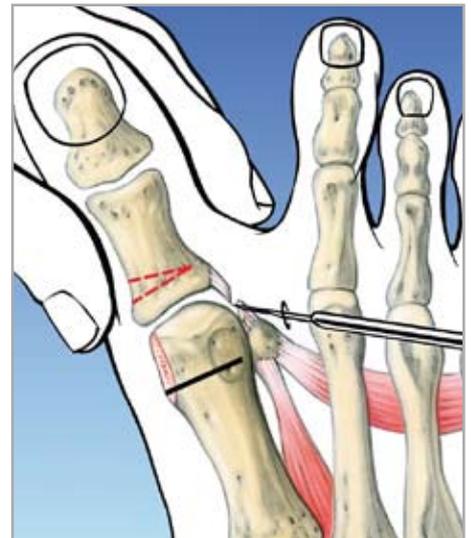
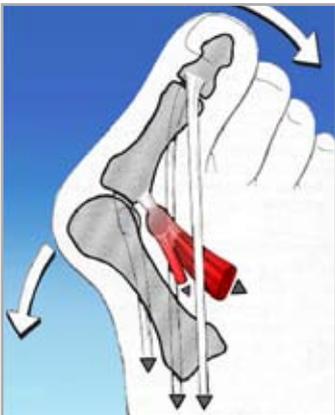
2. Reverdin-Isham Osteotomy

Distal wedge osteotomy of the first metatarsal (in some cases even a proximal wedge osteotomy is necessary).



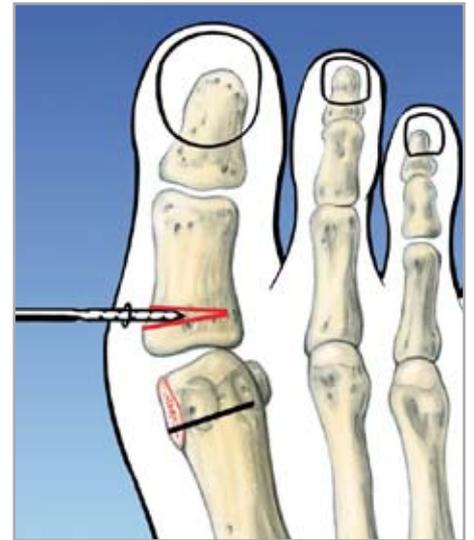
3. Lateral Release

Tenotomy of the hallux-adductor and lateral capsulotomy of the 1st MTP-Joint.



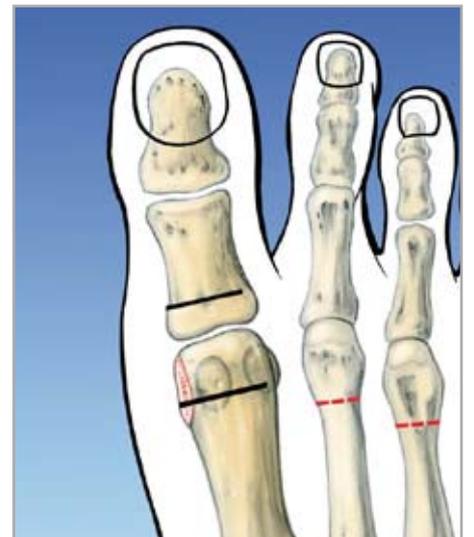
4. Akin- Osteotomy

Proximal wedge osteotomy of the first phalanx.



5. Eventually other procedures

For instance distal osteotomies of the central metatarsals (in case of metatarsalgia) or correction of hammertoes etc.



Postoperative care

1. A bulky postoperative splint dressing is applied by the surgeon.

- This dressing will protect the foot and should not be changed until the next appointment with the surgeon after one week.

2. According to the surgeon and the anesthesiologist:

- The patient will be discharged the day after the operation, accompanied by a person of his choice (the operated patient is not allowed to drive a car)
- Full weight bearing is allowed with a rigid postoperative shoe (DARCO®)
- After a hindfoot operation: only partial weight bearing will be allowed in a Vacoped®-Boot.

3. The first postoperative week:

- Allowing reasonable walking distances with the rigid postoperative shoe, interrupted by pauses with elevation of the foot.
- After the first postoperative week the patient will be seen in the etzelclinic: the postop dressing will be changed and the stitches will be removed.
- For the next 3 weeks the patient will have on a washable toe separator, band-aids and a cohesive bandage (Coban®) dressing. The patient may change this dressing as needed, such as after taking a shower.



Chaussure médicalisée DARCO®



Botte VACOPED®

4. At the end of the first postoperative month:

- The patient will see his surgeon with new radiographs.
- The patient may get in to a "regular" shoe at this point if the swelling allows. The footwear must be supportive and wide (DO NOT wear any shoes that have been stretched and molded to the bunion bump deformity before the operation). Many people prefer to wear a sandal similar to a "Birkenstock" sandal with a cork sole and buckle straps. These sandals are supportive, and allow the patient to loosen the buckles on the postoperative foot to accommodate swelling. Other patients prefer a tie shoe for support and often purchase a larger size or wider inexpensive sneaker or sport shoes for their postoperative recovery period.
- The reeducation program will be started (gait, stabilization and muscular reinforcement), eventually under the guidance of a physiotherapist.
- Sports like biking or swimming are already allowed.
- Thus the period of disability is usually about 3 – 4 weeks, respectively 5 – 6 weeks after a hindfoot operation.

5. The next appointment will be fixed after 3-4 months post-operatively:

- With new radiographs, to control the consolidation of the "bone cuts" (osteotomies).
- At this point the patient is usually allowed to wear all footwear (also stylish shoes as tolerated) and to retake all sporting activities (including running and contact-sports).



Hallux valgus and Metatarsalgia



4 weeks postop



4 months postop

Conclusion

I hope these explanations could already answer some questions in the field of foot & ankle surgery. You will find more information on our homepage www.etzelclinic.ch (mainly in German).

All your special problems and questions should be discussed personally with your surgeon. Please don't hesitate to contact me for an appointment.

Thank you for your attention

Dr. med. Alex Pellegrino

