

## **Forefoot deformations**

Foot conditions that can be treated through surgery:

- Hallux valgus (knots)
- Hallux rigidus (arthrosis)
- Deformations of the fifth toe (Tailor's bunion, quintus varus)
- Hammertoe (Hallux malleus)
- Metatarsalgias (foot pain), Morton's disease
- Rheumatoid foot
- Other congenital or acquired deformations

There are multiple causes for these conditions:

- Particular foot conformation
- Neurological, metabolic or rheumatoid conditions
- Traumas (fractures), burns

Symptoms:

- Intense plantar pain, accentuated during walking
- Walking impairment (the distance that can be achieved is limited by pain)
- Walking barefoot is more painful than wearing shoes
- Areas of hyperkeratosis (calluses)

### **Hallux valgus (knots)**

Hallux valgus is a frequent condition in foot pathology and it involves the deviation of the great toe towards the exterior.

Usually, this condition occurs bilaterally, especially in women and it can be considered a condition of the flatfoot or of any other factor that leads to the pronation of the hallux.

There are several factors involved in the occurrence of this deformity. Thus, it is general knowledge that non-physiological, triangular, pointed-toe shoes constrain the toes and deviate the great toe towards the exterior, thus creating an abnormal prolonged posture.

Hallux valgus can lead to static disorders that start from the great toe and progressively include the entire forefoot.

### **Symptomatology**

The main clinical sign is pain in the metatarsophalangeal joint – initially the pain is dull, but afterwards its intensity increases – that begins with arthrosis and moves on to bursitis with irradiation of the sensitive nerves; later on, the pain spreads to the shank and to the sole of the foot.

In the first and second clinical stages of the disease, pain is present when wearing shoes and it is absent when walking barefoot; moreover it does not have a nocturnal character. However, in the third clinical stage of the disease, when the hallux deviation determines the imbalance of the forefoot, pain is mainly located in the 2<sup>nd</sup> and 3<sup>rd</sup> metatarsophalangeal joints. In this case, pain is present with every step, thus limiting the walking distance. Furthermore, the pain accentuates when

walking barefoot and it does not disappear during rest. This can also cause insomnias and a nocturnal discomfort that is proportional to the daytime activity.



### **Treatment**

The prophylactic treatment consists of wearing physiological shoes, practicing medical gymnastics and swimming and local hygiene.

The conservative treatment is applied in the first stages of the deformation and it consists of wearing orthopaedic shoes with plantar support and arch support.

The radical treatment of this condition is surgery. Through surgery the doctors try to correct the deformation, by adapting the treatment to each patient. The surgical treatment is performed after a close investigation and after treating the basic disease. The orthopaedic surgeon has to correct the foot skeleton, to rebalance the muscles of the first foot radius and to preserve the functional capacity of the foot.

The surgical treatment of knots aims to provide the patient with a painless and deformity free foot that will enable the patient to recover the functionality and aesthetics of the foot.