***OTHOPAEDICS I.***

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**We have done introduction to orthopaedics and now we can talk on conditions based on the seven easily remembered pairs.**

**CONGENITAL CONDITIONS.**

**Congenital conditions are disorders children are born with and can be due to many causes. The disorders are many but we will tackle the commonly seen in our set up and their management.**

**TALIPES EQUINOVARUS {IDIOPATHIC CLUB FOOT}.**

**Congenital deformities of the foot are common. The term Talipes is derived from Talus (Latin-Ankle bone) and Pes (Latin-Foot). Equinovarous is one of the several different talipes deformities. Others are talipes calcaneus and talipes valgus.**

**In the full blown equinovarus deformity the heel is in equinus, the entire hind foot in Varus and the mid and fore foot adducted and supinated. The abnormality is relatively common, the incidence ranging from 1-2 per thousand births, boys are affected twice as often as girls and the condition is bilateral in one third of the cases.**

**The exact cause is not known although the resemblance to other disorders suggests several possible mechanisms.**

**A Germ defect or a form of arrested development. Its occurrence in Neurogical disorders and neuro tube defects (myelomeningocele and spinal congenital disorder of neural tube) points to a neuro muscular disorder. Severe forms of club foot are seen in association with group of congenital disorders, tibia deformity and constriction rings. In some cases, it is no more than a postural deformity caused by a tight packing in an overcrowded uterus.**

**PATHOLOGICAL ANATOMY.**

**The neck of the talus points downwards and deviates medially, whereas the body is rotated slightly outwards in relation to both calcaneum and ankle mortise. The posterior part of the calcaneum is held close to the fibula by a tight calcaneo-fibula ligament, is tilted into equinus and Varus, it is also rotated medially beneath the ankle. The navicular and entire fore foot are shifted medially and rotated into supination (the composite Varus deformity).**

**The skin and soft tissues of the calf and medial side of the foot are short and under developed. If the condition is not corrected early, secondary growth changes occur in the bones, these are permanent. Even with treatment the foot is liable to be short and the calf may remain thin.**

**CLINICAL FEATURES.**

* **Obvious deformity at birth.**
* **The foot is both turned and twisted inwards.**
* **The sole faces posteromedially.**
* **Ankle is in equinus.**
* **The heel is inverted.**
* **The forefoot is adducted and supinated.**
* **Foot has a high medial arch(cavus).**
* **Protrusion of the talus on the dorsolateral surface of foot.**
* **Heel usually small and high.**
* **Calf is abnormally thin.**
* **Deep creases appear posteriorly and medially (incomplete constriction bands).**

**In normal baby the foot can be dorsiflexed and everted until the toes touch the front of the leg. In club foot this manoeuvre meets with varying degrees of resistance and severe cases the deformity is fixed. The infant must always be examined for associated disorders such as congenital hip dislocation and spina bifida.**

**DIGNOSIS.**

**History.**

**Clinical examination**

**X-ray**

**TREATMENT.**

**The aim of the treatment is to correct the deformity early and restore normal functionality of the foot. There are several methods of treatment but relapse is common especially babies with associated neuromuscular disorders.**

**CONSERVATIVE TREATMENT.**

**1.Should begin early within a day or two of birth.**

**2.Repeated manipulation and adhesive strapping that maintains the correction.**

**3.Mother should be taught and should be able to carry out gentle stretches on regular basis with strapping still in place. Especially when the child is breastfeeding.**

**4.Treatment is supervised by (orthopaedic/Trauma officer. physiotherapist) who alters the strapping as correction is gradually obtained.**

**5. A light plaster of Paris(POP)[over a protective layer of strapping] which is changed every week. AIM AT OVERCORRECTION.**

**6.Resistant cases ill usually declare themselves after 8-12 weeks of serial manipulations and strapping. The Surgeon then faces a choice of early surgery or continued conservative treatment. [Surgery better when child has grown larger foot-easy to operate than neonatal].**

**7.This delayed operative approach is suitable for severe, rigid deformities, however for less severe cases it may be preferable to operate at 6 months of age, but manipulation and splintage must still be continued until the is walking.**

**OPERATIVE TREATMENT.**

**The objectives of the club foot surgery are>**

1. **The complete release of joint tethers, capsular and ligamentous contractures and fibrotic bands.**
2. **Lengthening**

**Of tendons so that the foot can be positioned normally without undue tension.**

**NOTE. A detailed knowledge of the pathological Anatomy is paramount.**

**OTHERS.**

**1.Metatarsus Adductus**

**2.Talipes calcaneovalgus**

**3.Congenital convex pes valgus (Congenital vertical Talus).**

**YOU MAY READ MORE ON EACH.**

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