Blount's Disease

Synonyms: tibia vara

Blount's disease is a disorder of the tibial growth plate (usually the medial aspect) leading to changes in the angle at the knee. This results in bowing of the leg (usually the lower leg). However, unlike bow legs, it is pathological and progressively worsens. Clinically it is difficult to distinguish between simple bowlegs and Blount's disease. However, bow legs should resolve between the ages of 2-4 years - if not then one should suspect Blount's disease.[1]

Infantile Blount's disease[2]

Epidemiology
Presents at age 2-4 years

Risk factors
Repetitive trauma to a knee with an already varus abnormality

Presentation
- Usually bilateral
- Bony prominence over the medial tibial condyle (nontender)[3]
- Feet held in pronation
- Shortening of the involved leg
- Medial angulation and internal rotation of the proximal tibia
- Gait - painless varus thrust seen

Investigations
Plain radiographs show increased angulation between the metaphysis and the longitudinal axis of the tibia.

Differential diagnosis[3]
- Physiological bow legs
- Rickets
- Osteomyelitis
- Trauma
- Ollier's disease
- Metaphyseal chondrodysplasia
- Focal fibrocartilaginous dysplasia

Management
- Braces - these are long-legged and lock the knee and need to be worn whilst weight bearing.
- However, if by the age of 4-5 years the condition has not corrected then surgery is usually required.
Surgery usually involves osteotomy of the tibia and realignment of the lower leg.

Prognosis
- Bracing is usually unsuccessful in girls and in those with obesity.
- If treatment is successful there is usually no residual disability or cosmetic abnormality.\(^{[4]}\)

Adolescent Blount's disease\(^{[5]}\)
Usually the adolescent variety is less severe than infantile Blount's disease.

Risk factors
- Bow legs
- Females
- Afro-Caribbean ethnicity
- Obesity
- Walking at an early age
- Possible family preponderance

Presentation
- Commonly unilateral
- Varus deformity
- Shortening of the involved leg by up to 3-4 cm
- Pain at the medial prominence of the proximal tibia
- Medial tibial torsion may also be present

Investigations
Plain radiographs, as for infantile Blount's disease.

Treatment
High tibial osteotomy is usually the procedure of choice. This is attractive, as limbs are not shortened; however, it requires the wearing of an external fixator for several months.

Further reading & references
1. Blount's disease; e-Radiography
2. Infantile Blount's disease; Paediatric Genu Varum; Wheeless' Textbook of Orthopaedics
3. S.R. Boyea and J.R.Bowen; Clinical case presentation on Blount's disease; June 1996.
4. Blount's disease; Medical Encyclopedia; Apr 2006.
5. Adolescent Blounts Disease, Wheeless' Textbook of Orthopaedics

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