

The Limping Child:

1.) Introduction

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Module Overview

- **Lecture 1: Introduction:**

- Assessment of the limping child
- Differential Diagnosis
- Red Flags

- **Lecture 2: Septic Arthritis**

- **Lecture 3: Developmental dysplasia of the hip**

- **Lecture 4: Perthe's Disease**

- **Lecture 5: Slipped Upper Femoral Epiphysis**

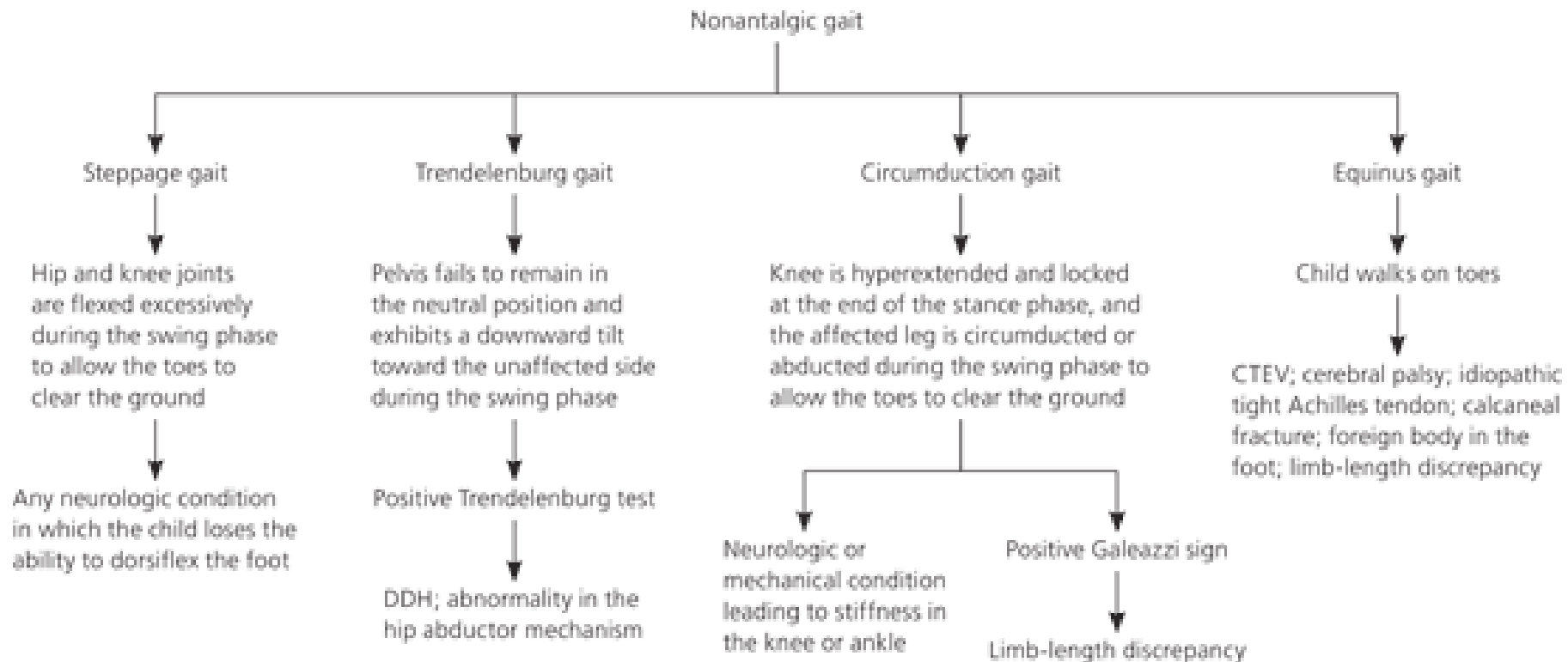
Limp

= Abnormal gait pattern due to ***pain***,
weakness or ***deformity*** of the
musculoskeletal system

Antalgic Gait

- Stance phase of gait is abnormally ***shortened*** on affected side relative to the swing phase
- Protective – in order to avoid pain

Non-antalgic Abnormal Gait Patterns



Differential Diagnosis – Painful Limp

Toddler: 1-3 Years	Child 3-10 years	Adolescent 11-16 years
<ul style="list-style-type: none"> • Septic Arthritis • Transient synovitis • Osteomyelitis 	<ul style="list-style-type: none"> • Septic Arthritis • Transient synovitis • Osteomyelitis 	<ul style="list-style-type: none"> • Septic Arthritis (consider gonococcal) • Osteomyelitis
<ul style="list-style-type: none"> • <i>Developmental dysplasia of the hip</i> 	<ul style="list-style-type: none"> • <i>Legg-Calve-Perthes disease</i> 	<ul style="list-style-type: none"> • <i>SUFE (Slipped upper femoral epiphysis)</i>
<ul style="list-style-type: none"> • Juvenile RA 	<ul style="list-style-type: none"> • Juvenile RA 	<ul style="list-style-type: none"> • Juvenile RA
<ul style="list-style-type: none"> • Tumour 	<ul style="list-style-type: none"> • Tumour 	<ul style="list-style-type: none"> • Tumour
<ul style="list-style-type: none"> • Toddler Fracture • NAI 	<ul style="list-style-type: none"> • NAI 	<ul style="list-style-type: none"> • NAI
	<ul style="list-style-type: none"> • Osteochondritis desicans 	<ul style="list-style-type: none"> • Osteochondritis desicans • Osgood-Schlatters

History

- ***Pain:***
 - site, onset, character, radiation, timing, aggravating and relieving factors
- ***Gait abnormalities/limp:***
 - Onset, timing
 - (as observed by parents)
- ***Deformity***
- ***Systemic Features***
 - Fever, lethargy, nausea
 - Changes in feeding/nappies (infants)
 - Weightloss, night sweats
- ***Recent illnesses and infections***
- ***Recent travel***



History (cont.)

- Past medical history
- Medications/Allergies
- Developmental history
 - Any pre/peri/post natal complications
 - Milestones
 - Walking
- Immunisation History
- Family History
- Social history
 - Who is at home
 - Any smoking in the house
 - Any contact with social services
 - » Always bear NAI in mind



Examination

- ABCDE approach if acutely unwell
 - Check vital signs - consider sepsis
- **Look**
 - General appearance
 - Observe gait
 - Look for redness, bruising, deformity, assymetry
- **Feel**
 - Palpate joint (observe for tenderness, warmth, effusion)
- **Move**
 - Observe active range of movement
 - Passive range of movement
 - Hip – internal/external rotation, flexion/extension, abduction/adduction
 - Knee - flexion/extension
- **Consider**
 - Spinal examination
 - Examination of foot and ankle
 - Examination of chest, ENT, abdomen if indicated



Investigations

- ***Blood tests***

- FBC, U+E, inflammatory markers (ESR + CRP)
- Consider blood film
- Consider blood cultures

- ***Plain film Radiographs***

- AP + frog leg + lateral hip
 - » +/- Other lower leg radiographs

- ***+ Consider:***

- Ultrasound
- MRI
- CT (can be useful for bony pathology/operative planning – but used with caution – radiation)



Exclude the bad and the urgent...

- Septic arthritis/Osteomyelitis
- Cancer
- NAI
- SUFE
- DDH
- Perthes Disease
- Spinal causes