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A child is not a miniature adult!!

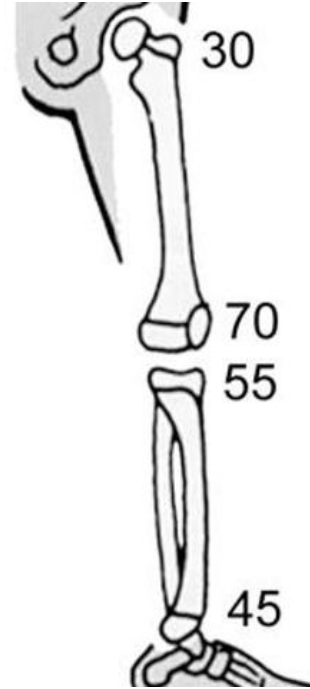
- How to approach a child or adolescent with a rupture of the anterior cruciate ligament
- The view of a pediatric physical therapist

Prevalence anterior cruciate ligament rupture

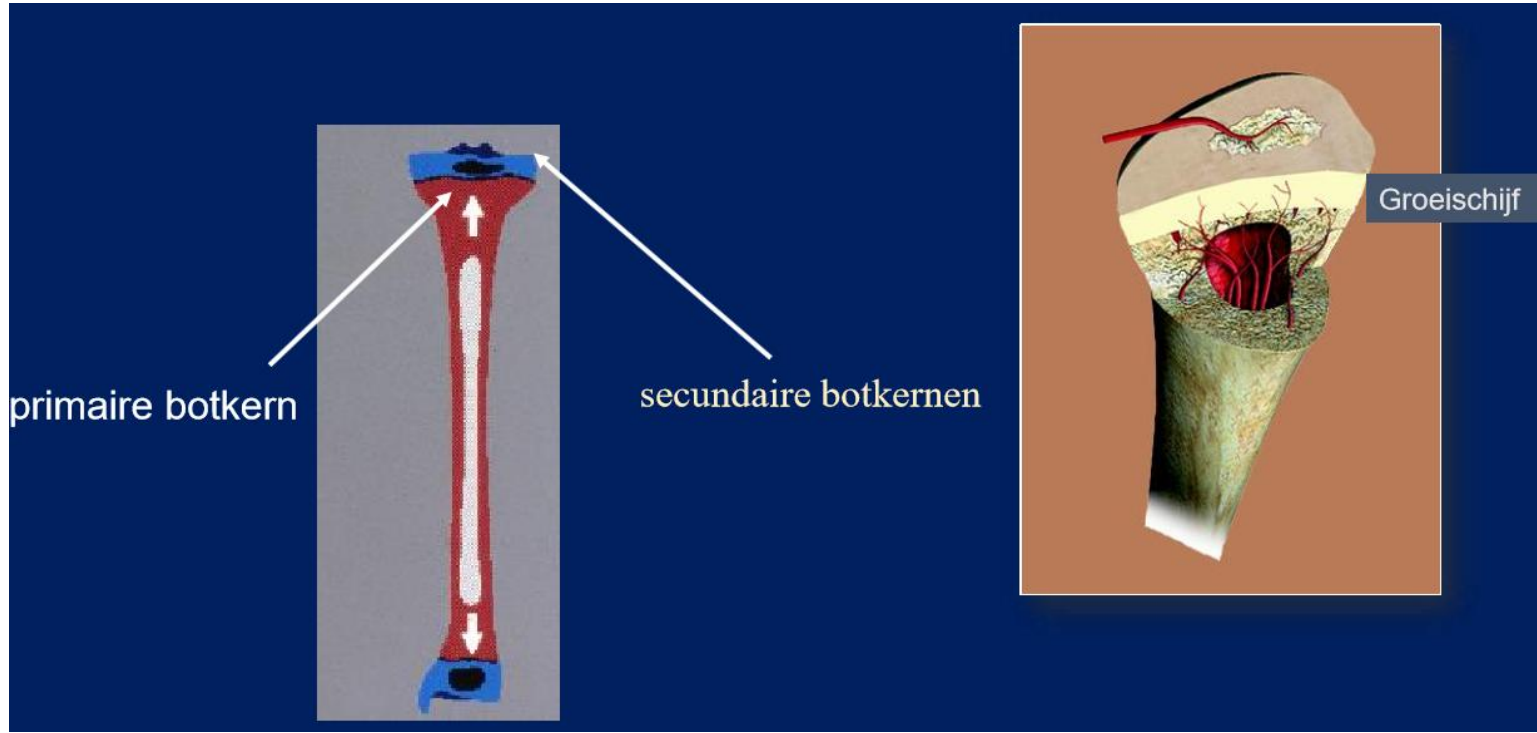
- Ligaments are 2-3 times stronger compare to bone
- < the age of 13 rupture of ligaments are rare, often damage to other structures like meniscus >60%
- < 5% of all ACL are children, most of them > 9 years old
- Up to the age of 13 boys = girls
- > the age of 13 2 times more boys
- Mostly sports trauma, other causes are a fall or traffic accident

Growth and Development

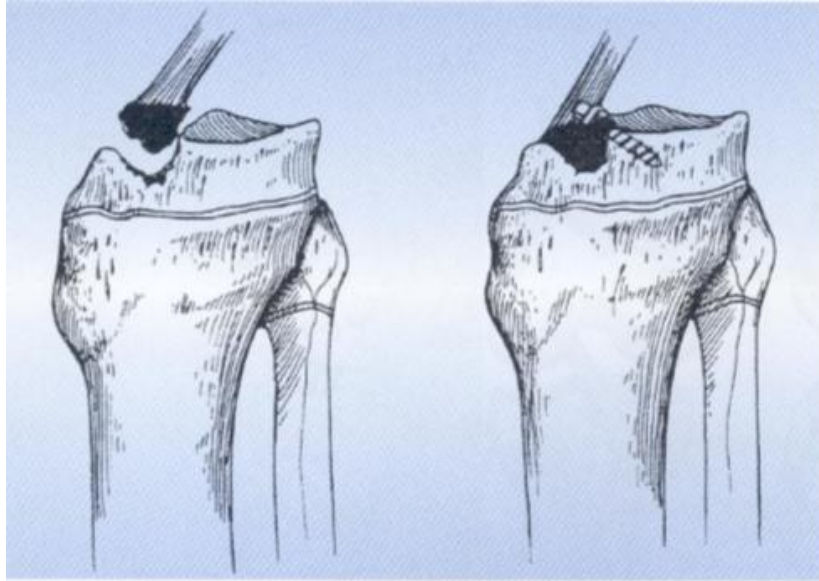
- Children and adolescence are growing
- Epiphyse of distal part of the femur and proximal part of the tibia are at risk by ACL rupture
- Distal Femur = 40% and Proximal Tibia = 25% off total leg length!



Epifyse



Eminentia fracture



Treatment: A functional knee with good stability for an active lifestyle for the length of life

- Conservative?
- Reconstruction?

- Eminentia fracture or ACL rupture?
- Epiphyse open or closed?

Conservative

- < 50% rupture
- 3-4 months physical therapie
- Adjustment of sport activities
- Increased risk of secundair meniscus and cartilage injury
- > 50% rupture high risk for total rupture

Total rupture

Conservative

- No sports
- Physical therapy
- Brace is optional
- Spontaneously recovery is rare!!

Reconstruction ACL

Reconstruction ACL

- Epifyse open or closed?
- Best technique?
- Protocol of rehabilitation?

ACL rupture in childhood is a complex healthproblem!

- Evidence based?
- Long term outcome?
- Mechanical reasoning and clinical expertice!

Clinical uncertainly!!

Risks of reconstruction

- Length discrepancy of the leg
- Change of position of the knee (local disturbance of growth)
- Recurrence of ACL rupture increases 8x age under 18
- 13-15 year olds 6,7% recurrence, adults 2%
- 13-19 soccerplayers highest risk of recurrence

Considerations of Physical therapy both conservative and after reconstruction

- Skeletal and developmental age of the child / adolescent
- Learning strategy
- Support system
- Motivation
- Pain believe / anxiety

- You have to look at the whole package!

Conclusion

We **don't** know enough about ACL rupture and recovery in childhood and adolescence

We **do** know they are vulnerable both physical and mentally

Be critical, careful and adjust

Let's work together and place the child in the spotlight

Don't treat them like an adult because they are **not** a miniature version



TIME OUT

