

SUBJECT :

Dear all,

This 15 year old junior of the Dutch National water polo team fell from his bike about 18 months ago. No prior treatment has been installed.

Subsequent conventional X-rays revealed no abnormalities. A MRI showed a Kienbock, lunatomalacia grade I , according to Lichtman criteria and a volar lunate margin fracture. We started with a cast immobilization for 8-12 weeks.

Can anyone comment on these questions?

- Natural history in adolescents ?
- anyone experience with bone growth stimulation in Kienbock s disease at this age?
- Fix the fracture?
- when would you advise him to go back to play or swim
- any alternative options?

Regards,

Reinier Feitz
Plasticsurgeon

DISCUSSION :

in younger children (around 10) conservative treatment is usually efficient (see publication dumontier or irrizari). It is already a teenager and he will probably evolve like an adult (see publication herzberg)

However you may try rest in a cast/splint and MRI survey for the next 6 months but if this treatment does not give any improvement I will suggest vascularized bone graft. No experience with bony stimulation. Fix the fracture is probably useless

Pr Christian Dumontier

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His growth plate is not closed, biologicaly he may evolve as child...

Carla Ricardo Nunes

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Dear all,

The growth plate of the radius many times remains open until 20-21 years of age. I believe the growth plate should not be a decisive factor.

Regards,

Henk Coert

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Dear All,

Bone Growth Stimulation is an interesting idea. I have never heard about it.

Conservative treatment and MRI survey is probably the wiser choice in my opinion. I would propose sport exemption and a splint with self reeducation (rather than a cast) for three month.

If no clinical and radiological improvement, perhaps a **radius shortening** fixed with a volar locking plate could be considered.

A mini invasive volar approach could be used (see Lebailly/Liverneaux, Zemirline/Liverneaux and up coming Taleb's article about mini invasive radial osteotomy for distal radius malunion).

The plate could be placed just a little more proximal to avoid growth plate injury.

An arthroscopic evaluation (and repair) of intra carpal ligaments (scapho lunate) would have to be done during the same procedure.

No immobilization after surgery, early self reeducation and back to swimming pools when radiological consolidation will be achieved.

Good Luck with your patient,
Hope my humble propositions will help in some ways.

Dr Frédéric Lebailly
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