

Age-related strategies in Pediatric Traumatology

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Abstract

Dealing with Pediatric Traumatology we must care for many special things in the growing child. First, phases with different potential concerning length-growth act as "good cops" while correcting misalignments especially in children below the age of 10 through remodeling. This positive corrective ability can often be used in conservative treatment. On the other hand, they can cause serious trouble ("bad cops") with partial or total arrest leading to deviation of axis or length-discrepancy.

As many examples would clarify these topics, in this keynote speech five different locations will be discussed in detail:

Clavicular Shaft Fractures: Clear Indication for preferred ESIN-Osteosynthesis is rare cases of bilateral fracture, open fracture, and neurological damage. In adolescents we offer ESIN-Osteosynthesis with serious dislocation of the fracture and desire for immediate mobilization.

Proximal humeral fractures: Osteosynthesis is indicated in open fracture, neurologic lesions, or complete dislocation beyond the age of 10-12 years. For adolescents we see an advantage in ESINO steosynthesis (no K-wires) with deviation $>20^\circ$ and desire for immediate mobilization.

Femoral shaft Fractures: Below the age of three these fractures are treated in a cast, older children are provided with a 3-nail-modification of the classical 2-C-shaped ESIN osteosynthesis, while we implant a lateral femur nail in adolescents with open physes.

Lesions of the cruciate ligaments: In children <10 years dislocations of the eminentia intercondylaris, can often be treated conservatively, in other cases, arthroscopic or open reduction and fixation with screws or transosseal sutures is recommended. True ligamentous injuries (mostly the ACL) need a replacement with hamstring grafts.

Fractures of the distal Tibia: Irregularities of the joint-surface need reduction and then are preferably stabilized with screws; lesions of the open physes must be treated with special attempt to reduce the risk of partial or total growth arrest.

Conclusion:

Pediatric Traumatology is the small, but fine art to treat injuries of children and adolescents according to localization, severity of injury and displacement, biological age and the individual desire and character of our little patients with most possible success



Biography:

Martin M Kaiser is the Clinic Director at University Medicine and Chief Physician for Child Traumatology at Bergmannstrost, Halle, Germany. He received his license to practice medicine in 1993. Since 2015 he has been an Associate Professor of Pediatric Surgery in Lübeck.

Speaker Publications:

1. "The weak 3D topological insulator $\text{Bi}_{12}\text{Rh}_3\text{Sn}_3\text{I}_9$ ". June 2020 *Chemistry - A European Journal*.
2. "Crystal Growth and Structure Determination of Pigment Orange 82"; February 2019 *Zeitschrift für anorganische und allgemeine Chemie*.
3. "Low-Temperature Ordering in the Cluster Compound $(\text{Bi}_8)\text{Ti}[\text{AlCl}_4]_3$ "; March 2019 *Inorganics* 7(4):45.
4. "Front Cover: Crystal Growth and Structure Determination of Pigment Orange 82 (*Z. Anorg. Allg. Chem.* 6-7/2019)"; April 2019 *Zeitschrift für anorganische und allgemeine Chemie* 645(6-7):558-558.
5. "Chemical Aspects of the Candidate Antiferromagnetic Topological Insulator MnBi_2Te_4 ". April 2019 *Chemistry of Materials* 31(8).

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