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New options in the treatment of Pediatric fractures**Gergo Jozsa***Department of Pediatric Traumatology, Hungary*

The use of resorbable implants is currently not the primary procedure of choice in fracture treatment; however, the frequency of their use shows an upward trend and is developing rapidly. Nowadays, it is used more and more often during various traumatological operations on children.

Absorbable polymers have been used as surgical implants for more than three decades. In the case of first-generation polymers such as polyglycolic acid (PGA) and polylactic acid (PLA), several disadvantageous properties were experienced, such as too long absorption time and the appearance of adverse tissue reactions after implantation. In the case of second-generation polymers, such as PLGA (poly-L-lactide-co-glycolic acid), such disadvantages do not have to be reckoned with. Among the biodegradable implants, rivets, nails, various screws and intramedullary nails (IM-Nail) are most often used. PLGA does not cause adverse tissue reactions, it slowly degrades as it reacts with the water in the human body. It breaks down into its large co-polymer elements, until finally – being an organic substance – carbon dioxide and water are produced, which leave the body physiologically. The basic goal in the development of absorbable implants was that the material to be implanted had a high mechanical load capacity, but at the same time, during the physiological processes of bone healing, it was broken down into its elements and absorbed in the way described above. An advantageous feature of the method is that these implants are made of so-called 'biologically compatible' materials, so their use is safe, and we do not have to expect allergic reactions, which are rarely experienced with metal devices. The most important advantage is that there is no need for another surgical procedure to remove the implants. On the downside, absorbable implants are currently very expensive. This negative feature is mitigated by the fact that another surgery - which also results in high care costs - is not necessary to remove the implants. The Authors present our result and experiences of different pediatric fractures (distal radius, forearm, elbow, knee and ankle fractures) treated by resorbable implants (pins, IM nails, screws).

Biography

In 2009, he obtained a general medical degree at the Faculty of General Medicine of the University of Pécs. In 2015, he passed the Pediatric Surgeon, in 2018 the Hand Surgeon and the Pediatric Traumatology Proficiency Exam. He obtained his PhD degree in 2019. From 2019, he is the president of the Hungarian Pediatric Traumatology Section. From 2020, head of the Pediatric Traumatology Department of the Manual Department of the PTE-KK Children's Clinic.

Since graduating from university, he has been working at the Pediatric Surgery Department of the University of Pécs Pediatrics, currently as a university assistant professor. EPLS, AO Trauma, has an endoscopy exam, advanced English language exam. He teaches in Hungarian and English at the university. His main areas of interest are hand developmental disorders, burns, pediatric traumatology and general pediatric surgery. He is a member of the Hungarian Pediatric Surgeon, the Hungarian Society of Hand Surgeons, the Hungarian Burn Association, the European Pediatric Orthopedic Society (EPOS) and the European Society of Pediatric Endoscopic Surgeons (ESPES).