

SURGICAL TREATMENT OF OSTEOMYELITIS IN CHILDREN

Xujamberdiev Bobirjon Sobirjonovich

Andijan State Medical Institute

Children's Dentistry Department

Abstract: Osteomyelitis is a severe infection that affects the bone and bone marrow, commonly seen in children. Prompt and effective surgical intervention is crucial to prevent complications and promote rapid recovery. This article aims to explore the surgical treatment options available for osteomyelitis in children.

Keywords: CO, AHO, treatments, effects, results, patients, children, factors.

Introduction: Persistent osteomyelitis (CO) in kids as a result of intense hematogenous osteomyelitis (AHO) is turning out to be substantially less normal in industrialized countries. A few creators have considered CO as a neediness related illness that is because of restricted admittance to clinical consideration and absence of treatment for AHO. Other than as late difficulty of AHO notwithstanding, CO in youngsters might be brought about by bordering spread from neighborhood disease, from entering injury and from medical procedure.

This condition shows huge horribleness and is related to torment, joint firmness, precise disfigurements, appendage length error, primary imperfections and the presence of a continuing depleting sinus, yet extremely restricted information is accessible to direct clinicians being taken care of by the patients.

The essential objective in treatment is the annihilation of contamination. Alongside this, primary uprightness of the impacted bone section and counteraction of disfigurement are goals similarly vital to seek after in current times.

Return or reclamation of satisfactory capability is the ideal ultimate result.

Debridement medical procedure is generally consented to address the best technique for treating CO. The expulsion of dead bone and the debridement of the boil pit and of the granulation tissue that harbor microscopic organisms and prevent the course of foundational anti-microbials into the tainted tissues, are the backbones of disease control.

Nonetheless, careful debridement can bring about a broad dead space, a condition that might establish an optimal climate for the improvement of a constant bacterial disease. It is consequently that the issue of dead space following debridement must be viably tended to. In addition, occupying the dead space offers the chance to convey antimicrobial specialists straightforwardly at the disease site.

This goal has been accomplished for a long time with the utilization of anti-infection stacked polymethylmethacrylate (PMMA) concrete as dots or as spacers. One hindrance of PMMA is that, but it is utilized, it must be eliminated in an extra activity. Moreover, there is some worry that it might go about as unfamiliar body after it has completed to deliver the anti-microbial substance and, in this manner, give a base to new biofilms.

An option in contrast to PMMA is addressed by anti-microbial stacked calcium sulfate and, lately by bioactive glass. Bioactive glass S53P4 (Pack S53P4) is a manufactured, biocompatible, degradable and osteostimulative material with angiogenic and antibacterial properties. The movement of Pack S53P4, similarly to that of other bioactive glasses, is basically founded on surface responses that happen after implantation.

When conveyed to the ideal site, the openness to body liquids decides the initiation of such surface response. Silicon, sodium calcium and phosphate particles are delivered and increment the nearby pH and osmotic tension. Then a silica gel layer is shaped on the glass surface, and nebulous calcium phosphates encouraged. These indistinct designs crystalize to normal hydroxyapatite and, at last, the so framed hydroxyapatite enacts osteoblasts prompting the development of bone scaffolds and osseointegration.

A 5-year old kid gave subacute osteomyelitis described by a guileful beginning of side effects and was treated with anti-toxin inclusion and a negligibly intrusive surgery to reestablish the hard life systems of the distal femoral epiphysis. The injury completely reached out between the subchondral plate and the development plate. Careful admittance to the rigid depression was gotten exclusively through the articular opening of the injury and inspecting and debridement were then performed under endoscopic direction ("ossoscopy"), with incredible consideration not to harm the subchondral bone or the physics.

As of now, thirty years prior, Green et al. revealed essential subacute epiphyseal osteomyelitis in kids, who showed a very much twisted pit in the epiphysis with next to no association with the metaphysis.

The sign for a medical procedure in the detailed case depended on the clinical, lab and imaging proof for subacute osteomyelitis with boil development, bone deformity and septic articular contribution. Gao et al. surveyed patients with humeral epiphyseal osteomyelitis and revealed a more limited length of emergency clinic stay and intravenous anti-infection treatment, however a higher full recuperation rate in the careful gathering (83.3%), when contrasted with the moderate gathering (14.3%).

A higher pace of positive culture for the microbe has likewise been accounted for after careful administration, yet the last conclusion may likewise be founded on histology. The way that joint suction and blood societies delivered no bacterial development is entirely expected under anti-infection treatment and has been accounted for by different clinicians, regardless of whether they were over and again got. As a differential conclusion to pyogenic osteomyelitis, constant nonbacterial osteomyelitis in kids has been as of late described.

In 2008, Saisu et al. described comparative troubles in moving toward the epiphysis precisely, while saving both the physics and articular surface, completely debriding the sore simultaneously. In this unique circumstance, we concur that the direct visual control during the surgery adds huge security and viability, on the grounds that the osteomyelitis related delicate tissue parts (e.g., perilesional layer) are not pictured with fluoroscopic strategies.

The utilization of a 70° arthroscope or bended shavers might try and help the strategy in more complicated imperfection setups; however, this specialized change was excessive in the detailed case. Our strategy contrasts from recently detailed methods in two primary viewpoints, (1) a fenestration of the physics was not performed, on the grounds that the sore was not meta-epiphyseal, yet confined to the epiphysis; and (2) the making of bone passages with 4.8mm drills were tried not to by utilize the articular hole of the epiphyseal sore.

Moreover, the antegrade penetrating strategy could obstruct the utilization of a tourniquet over the knee joint, which might be useful during arthroscopy. Nonetheless, trying not to any penetrate is material just in sores that have proactively fostered an open articular association. In the writing, different reports recommend that the conclusion of subacute osteomyelitis or a deferred treatment habitually brings about an articular contribution.

Moreover, it has been portrayed for subacute osteomyelitis (>2 weeks), that the epiphyseal sore is in many cases situated in an unusual position, possibly working with the entrance into the joint. The unconventional position may likewise work with the careful access. Shah et al. made a little bony window to the epiphysis made by various drill openings.

Toepler et al. applied the strategy of "ossoscopy" for the insignificantly intrusive treatment of calcaneal blisters and bone imperfections; after endoscopic curettage, allogenic uniting was performed. The creators presumed that the method is straightforward, safe and savvy in harmless osteolytic sore of the calcaneus.

For our situation, we filled the deformity with engineered bone unite, in light of the fact that the sore expanded just until the subchondral plate and the hole was loaded up with joint liquid.

We in this way saw a sign to apply a void filler to upgrade mechanical strength inside the deformity and possibly to speed up bony recuperating of the imperfection. The use of bone unite for the distal femoral epiphysis has been suggested by Sorensen et al., who joined femoral and tibial injuries minus any additional particular of the material.

We feel particularly that the area and size of the deformity ought to be dissected fastidiously founded on X-ray. A new report from Philadelphia assessed singular long-bone epiphyseal sores in youngsters and detailed a middle volume of 2.8 mL in the carefully treated subgroup. A new report detailed an organized treatment and last bone deformity loading up with bio-glass for cavitory bone imperfections after osteomyelitis.

Different creators noticed uninteresting rigid mending without the utilization of bone uniting or even with nonsurgical means including the sole utilization of intravenous anti-toxins, while intently observing the osteolytic injury under X-ray. The debridement of the depression animated some bony draining and any further invigorating measures (e.g., plasma-rich plasma) were not performed.

As far as imaging constraints, we can't present scintigraphy imaging as introduced in a few exemplary distributions; nonetheless, the MRT gives off an impression of being predominant in responsiveness and particularity and stays the highest quality level for assessing the expansion of lone sores, careful preparation and illness checking.

For our situation, getting a later X-ray was obstructed by the ADHD determination and the legitimate gatekeeper denied the subsequent X-ray for assessment of the ligament and recuperating of the sore. Hence, we performed plain radiographs, as they are viewed as standard assessment for keep up.

Conclusion:Careful treatment assumes a pivotal part in the administration of osteomyelitis in kids. It offers a few benefits, including quick contamination destruction, protection of appendage capability, and worked on personal satisfaction. By understanding the different careful choices accessible, medical services experts can give powerful therapy and ideal results for youngsters with osteomyelitis.

References

1. Road, M.; Puna, R.; Huang, M.; Crawford, H. Pediatric Intense Hematogenous Osteomyelitis. *J. Pediatr. Orthop.* 2015, 35, 634-639.
2. Safdieh, G.; Silberman, J.; Nguyen, J.; Doyle, S.M.; Blanco, J.S.; Scher, D.M.; Green, D.W.; Widmann, R.F.; Dodwell, E.R. Pediatric Septic Joint pain and Osteomyelitis in the USA: A Public Youngster Data set Examination. *HSS J.* 2019, 15, 159-166.
3. Autore, G.; Bernardi, L.; Esposito, S. Update on Intense Bone and Joint Diseases in Pediatrics: A Story Survey on the Latest Proof Based Suggestions and Fitting Antinfective Treatment. *Anti-infection agents* 2020, 9, 486.
4. Dich, V.Q.; Nelson, J.D.; Haltalin, K.C. Osteomyelitis in babies and youngsters. A survey of 163 cases. *Am. J. Dis. Youngster* 1975, 129, 1273-1278.
5. Morrissy, R.T.; Haynes, D.W. Intense hematogenous osteomyelitis: A model with injury as an etiology. *J. Pediatr. Orthop.* 1989, 9, 447-456.



6. Spyropoulou, V.; Dhouib Chargui, A.; Merlini, L.; Samara, E.; Valaikaite, R.; Kampouroglou, G.; Ceroni, D. Essential subacute hematogenous osteomyelitis in youngsters: A more clear bacteriological etiology. *J. Youngster Orthop.* 2016, 10, 241-246.

Worldlyknowledge.uz