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294 days , 93 excellent, 157 good , 38 fair, 4 poor there where 6 problems , 7 obstacles according to Paley,s classification of complication , there was one persisting nonunion which required additional grafting . **Conclusions:** The external arc fixation system Salamehfix 1 is effective in bone defect treatment and more comfortable to the patient in size, stability and correction of combined angular deformities. **Acknowledgements**: The external arc fixation System Salamehfix1 is a comfortable and effective method of treatment bone defects gives good results and is wise to use.

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Outcome following treatment of diaphyseal femoral osteomyelitis using a monolateral external fixation system

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Background: The traditional monolateral fixation is not strong enough to overcome the strong deforming force of the strong adductor muscles which lead to varus deformity. The ring fixation, although provide a stable fixation of bone, is bulky and uncomfortable for the patients. This paper presents our result of treating patients with femoral osteomyelitis treated with a modern unilateral external fixation device. **Methods**: This was a prospective study of 22 consecutive patients treated for femoral osteomyelitis from 2010 till 2014. Only patients with minimal 2 years follow up were included in the study. The mean age of the patients was 28.7 (range 13 to 71) years old. Patients with osteomyelitis were divided into 3 types. type I is haematogenous osteomyelitis with pathological fracture (4 patients); type II is infected open fracture (3 patients) and type III is implant related infection (15 patients). Patients with type I osteomyelitis is treated initially with incision and drainage, and skeletal traction. External fixation is inserted after 2 to 3 weeks when the thigh swelling has reduced. In patients with type II osteomyelitis, the fracture end is resected until healthy bone. In type III osteomyelitis, the implants (2 intramedullary nails and 13 plates) are removed during the initial debridement. In 18 cases, acute compression was done after resection. In 4 cases, bone transport was done to fill the defect after the infection has been controlled. **Results:** Infections were resolved in all patients. All except one achieve union with mean union time of 8.5 (range 4-30) months. The mean limb length discrepancy is 2.2 cm (range 0-6 cm). Six patients (27%) have refracture following removal of the external fixation. One refracture because of persistence infection at the docking site. Three refracture at the docking site; one underwent interlocking nail, one reinsertion of LRS and one refuse further intervention. One patient had refracture at the thin bone segment. The fracture end was allowed to be overlap to get a bigger bone diameter and he was treated with reinsertion of external fixation and lengthening. One adolescent patient had fracture at the screw site was treated with skin traction. **Conclusions:** Monolateral external fixator is an effective alternative for stabilisation and reconstruction of femoral osteomyelitis. Caution should be taken when removing the frame to reduce the incidence of refracture. **Acknowledgements**: We do not have any conflict of interest in this study.

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Bone Transport For Chronic Tibia Osteomyelitis, Is It Necessary With Antibiotics Embedded Bone Cement Technique?

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Background: To evaluate if the antibiotics embedded bone cement reduce the recurrence of chronic tibia osteomyelitis after bone transport technique. **Methods**: 18 patients with chronic tibia osteomyelitis were randomly divided into two group. 10 patients were treated without antibiotics embedded bone cement, 8 were left vancomycin embedded bone cement (Vancomycin 3 gram in 20-gram bone cement) in the docking site. when the docking site was tight, the bone cement beads was put out gradually. The results were graded using Paley' s criteria. **Results:** One of the 10 patients without bone cement were lost to follow up, the others were all followed up with a range of 12 ~ 47 months with average of 31months, all were recovered from infection. The average wound closure time is 63 days for the bone cement group, and 69 days for the non-bone cement group, bony consolidation time for the bone cement group is 4.4 months, and the control group is 4.3 months. The complications were pin site infection, bone cement group 7, non-bone cement group 9; equine was 0 for both group; malalignment over 10°was 5 in bone cement group, and 3 in the control group, all were managed during follow-up; stiffness was 1 for bone cement group, 2 for non-bone cement group; and joint dislocation was 0 for both group. According Paley's rating scale, 7 excellent and 1 good for the bone cement group□7 excellent and 2 good for non-bone cement group. **Conclusions:** Thorough debridement could be enough for the treatment of chronic tibia osteomyelitis with bone transport technique even without antibiotics embedded bone cement in the docking site. **Acknowledgements**: Thank all our group team for all their effort and cooperation!

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Rehabilitation Of Patients With Congenital Pseudarthrosis Of The Tibia (Experience Of Ilizarov Center)

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Background: Congenital pseudarthrosis of the tibia (CPT) is a severe pediatric pathology that remains extremely challenging for management. Multiple recurrences result in considerable pathological changes in bone and soft tissues that make solving clinical tasks difficult. Segment fixation is a method of choice but the majority of surgeons prefer transosseous or intramedullary osteosynthesis, or their combination. However, neither technique guarantees consolidation and is able to ensure absence of recurrence. **Methods**: We analyzed outcomes of 61 patients that