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# Diaphyseal fracture-nonunion of forearm bone treated by compression plating aided with autologous bone grafting: A study outcome

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**Background & Aim:** The forearm fulfills an important role in the integrated function of the upper extremity. Fracture nonunion of forearm bone singly or both interfere with normal forearm function grossly. Nonunion of the forearm bone cause dysfunction of forearm as they effect interosseous membrane, elbow and wrist and limit the rotational movement of forearm that is pronation and supination, stiffness of the elbow and wrist due to long term immobilization. But treatment of fracture nonunion of forearm bone is still a therapeutic challenge and outcome is moderate at best. This study was design and carried out to assess the outcome of treatment of fracture nonunion of forearm bone by dynamic compression plating aided with autologous bone grafting from iliac crest.

**Method:** A prospective study was carried out from January 2010 to December 2015, where 20 cases of fracture nonunion of forearm bone (radius n=8, ulna n=6, both n=6) were treated in government/private hospitals situated in Kishoreganj of Bangladesh. Surgical procedure was performed following AO principle by dynamic compression plating aided with autologous bone grafting taken from iliac crest. Outcome was assessed by regular follow up, radiograph and functional outcome design by Anderson et al. Follow up time was 10 months to 24 months.

**Results:** Bony union was achieved within a median of 5 months and 18 patient achieved union within 4 months of revision surgery. According to the system of Anderson et al. 11 cases (55%) achieved excellent result, 4 cases (20%) had satisfactory and 5 cases (25%) had an unsatisfactory result. 1 patient developed infective nonunion.

**Conclusion:** This study showed that treatment of fracture nonunion of forearm bone using technique of compression plating osteosynthesis aided by autologous bone grafting represent an effective treatment option of this challenging condition.

## Biography

Md Abul Kenan has completed his Master's degree of Surgery in the field of Orthopedics from Dhaka University, Bangladesh in 2008. He has joined as 1st class Government Officer under Ministry of Health and Family Welfare, Bangladesh and still working. Currently he is working as an Assistant Professor and Head of the Department of Orthopedic Surgery at Shaheed Syed Nazrul Islam Medical College, Kishoreganj, Bangladesh.

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