Anilkumar V, Orthop Muscular Syst 2017, 6:3 (Suppl)
DOI: 10.4172/2161-0533-C1-035



# An innovative method of closed reduction and percutaneous pinning for all types of fracture distal end radius by using 6 K-wires in 2 plains

**Anilkumar V**
Semalk Hospital, India

**Introduction:** Distal End Radius (DER) is one of the most common fractures. Conventional mode of treatments is POP, ORIF and External Fixation. Presently percutaneous K-wire fixation is used as an add-on procedure to other methods.

**Objective:** The aim of this study is to find can we do CMR and per-cutaneous pinning alone for fracture DER as a new mode of treatment including comminuted and intra articular?

**Materials & Method:** It is a prospective study of 200 cases over a period of 4 years from 2011 to 2015. Patients aged ranged from 18 to 84 and grouped it into three groups. 109 patients in Group-1 (aged: 18-45), 65 patients in Group-2 (45-60) and Group-3 (>60) with 26 patients.

**Procedure:** Two triangles are created by crossing 6 K-wires in plains without skin incision by stabilizing the DRUJ. No wire protruding outside the skin, allows full range of finger movements and radio-carpel movement from the 1st POP day onwards except supination and pronation. The chance of residual deformity is reduced by the scaffolding action of the crossed K-wires forming 2 triangles in 2 plains by encircling the compressed comminuted metaphysical fragments and by stabilizing the intra-articular fragments.

**Results:** The results are evaluated on the basis of Green and O'Brien score modified by Cooney by analyzing pain, functional status, range of movement and grip strength. Overall result comes to 92.5% with a split up of 96% for Group-1, 91% for Group-2 and 81% for group-3.

**Conclusion:** The new mode of closed reduction and percutaneous pinning alone can be used as a surgical mode of treatment for all types of fractures of distal end of radius.

**Discussion:** Recent literature shows that specific technique is not as important as attaining anatomical reduction. Clinical outcome and biomechanical studies demonstrate that maintenance of palmar tilt (normal 11), ulnar variance (2 mm) and radial height (normally 12 mm) is the most important factor for obtaining good results. The 2 sets of K-wires crossing in the radial styloid and 2 transverse pins which stabilize the DRUJ prevent the radial inclination deformity, radial shortening and negative ulnar variance. The 2 transverse pins parallel to the articular surface and 2 proximal pins directing to lunar impacted fragments maintain the congruity of the radial articular surface. The 2 sets of 3 K-wires in 2 plains add strength and stability and maintain the normal palmar tilt and prevent metaphyseal collapse. It can also hold the fragments of Barton's.

## Biography

Anilkumar V has completed his Medical degree from Government Medical College, Trivandrum in the year 1986 and Post-graduation in 1989 from the same institution under the guidance of Professor Cheryan Thomas and Professor T.C Joseph. He has started his orthopedic carrier as Junior Orthopedic Surgeon at Semalk Hospital, Ottapalam in the year 1989 and mean while for 7 years from 1993 to 1999, he has also served for government sector and returned back to Semalk Hospital and continuing as the Senior Orthopedic Surgeon. He had done more than 5000 orthopedic surgeries of various types concentrating mainly on trauma. From 1999 onwards he started his research work in various fractures of the ends of the long bones by closed reduction and percutaneous fixation with K-wires. He has presented more than 10 papers in various orthopedic conferences at national and international level.

pgtakv@gmail.com

**Notes:**