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5, 10, 15, 20, 25mm

(AP-0), 60

(AP-I), 15

(AP-E), 45

(Ax-45),

(Ax)

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(AP-0) 0.599 (p = 0.285), 60

(AP-I) 0.790 (p = 0.112), 15

(AP-E) 0.522

(p = 0.367),

45

(Ax-45) 0.290 (p = 0.635),

(Ax) 0.890 (p = 0.043)

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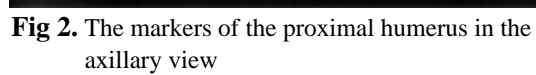
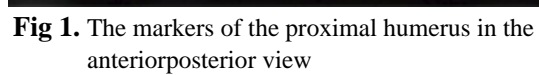
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**Table 1.** The displacement of greater tuberosity (mm)

view displacement	AP	AP-I	AP-E	Ax-45	Ax
5	25	30	20	18	17
10	27	34	29	22	22
15	31	38	26	19	28
20	42	50	35	5	35
25	30	41	26	37	42

AP : Scapular anteriorposterior view in neutral rotation of humerus

AP-I : Scapular anteriorposterior view in 60 degree internal rotation of humerus

AP-E : Scapular anteriorposterior view in 15 degree external rotation of humerus

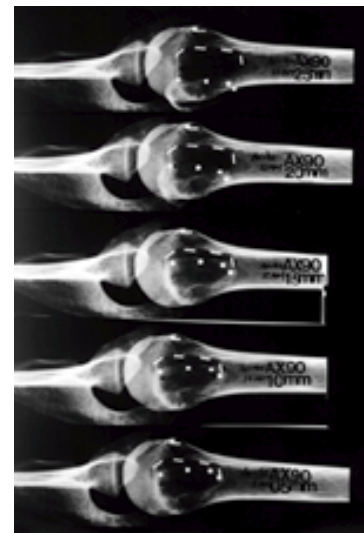
Ax45 : Shoulder axial view in 45 degree abduction of humerus

Ax : Shoulder axial view in 90 degree abduction of humerus

(AP-0) 0.599(p=0.285), 60  
(AP-I)  
0.790(p=0.112), 40  
(AP-E) 0.522(p=0.367), 45  
(Ax-45) 0.290  
(p=0.635), (Ax) 0.890(p=0.043)  
(Table 1).

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**Fig 3.** 90 degree abduction axillary view

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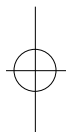
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## Abstract

## Radiologic assessment of the displacement of the greater tuberosity of the humerus

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**Purpose :** The purpose of this study is to evaluate the correlation between the amount of displacement of the greater tuberosity of the humerus and the that of the radiographic displacement.

**Materials and Methods :** Dry bones of the scapula, humerus were fixed to the board. After cutting the greater tuberosity, the center of the lesser tuberosity, the anterior and inferior margin of the greater tuberosity fragment, the anterior edge of the bone defect at the greater tuberosity were marked with wire. The humerus were placed in the neutral position, 60 degree internal rotation, 15 degree external rotation, 45 degree abduction, 90 degree abduction. The radiographs were taken in the position of the 5, 10, 15, 20, 25mm posterior superior displacement of the fragment respectively.

**Results :** The correlation coefficient between the amount of displacement of the greater tuberosity of the humerus and the that of the radiographic displacement were followings; 0.599( $p=0.285$ ) in the neutral anterior posterior view, 0.790( $p=0.112$ ) in the 60 degree internal rotation view, 0.522( $p=0.367$ ) in the 15 degree external rotation view, 0.290( $p=0.635$ ) in the 45 degree abduction axillary view, 90 degree abduction axillary view.

**Conclusion :** The 90 abduction axillary view was the most appropriate radiograph to evaluate the amount of displacement of the greater tuberosity of the humerus.

**Key Words :** Humerus, Greater tuberosity fracture, Displacement