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RESEARCH ARTICLE

SEVER INFERIOR HUMERAL HEAD SUBLUXATION FOR 3 MONTHS IN PROXIMAL HUMERUS FRACTURE DISLOCATION

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Abstract

Proximal humerus fracture is common fracture 4-6% of all fractures (1), third most common non vertebral fracture in elderly >65 years (2), affecting female more than males in ratios of 2:1.Approximately half (51%) of these fractures are displaced, the majority of which involve the surgical neck (77%). (3) Surgical treatment (mainly internal fixation or humeral head replacement) is being increasingly used (4).Management of each fracture is dependent of patient factors, fracture pattern, and complexity.Case scenario:33 years old female not known to has any medical illness, presented to the emergency department with right shoulder pain and inability to move it after motor cycle accident. X-rayshowed proximal humerusfracture dislocation Upon Post-operative follow up patient developed sever inferior humeral head subluxation, With intact axillary nerve sensation and motor exam.Discussion:proximal humerus fracture is common, fracture pattern and type, with patient factors will guide your management.proximal humerus fracture dislocation is more difficult and challenging to surgeon in managing such fracture, with inferior hemeral head subluxation is common can reach to 42% in the radiographic incidence among proximal humerus fracture.

Introduction:-

Proximal humerus fracture is common fracture 4-6% of all fractures (1), third most common non vertebral fracture in elderly >65 years (2), affecting female more than males in ratios of 2:1.

Approximately half (51%) of these fractures are displaced, the majority of which involve the surgical neck (77%). (3) Surgical treatment (mainly internal fixation or humeral head replacement) is being increasingly used (4).

Management of each fracture is dependent of patient factors, fracture pattern, and complexity.

Case scenario

33 years old female not known to has any medical illness, presented to the emergency department with right shoulder pain and inability to move it after motor cycle accident.

After ATLS protocol clearness, clinically there was right shoulder tenderness, swelling, bruises with restricted range of motion (ROM) and neurovascular examination was intact.

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x-ray and CT showed proximal humerusfracture dislocation

Figure (1) **figure (2)**

Figure1 and 2:- X-ray of right shoulder showing proximal humerus fracture dislocation.

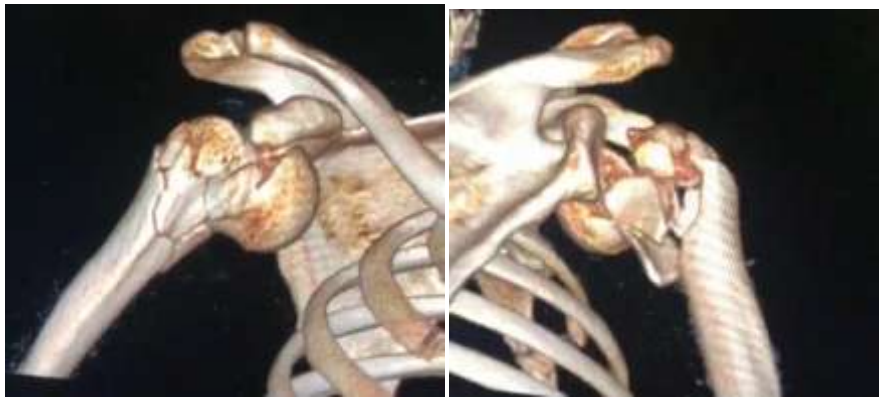

Figure 3 **figure 4**

Figure 3 and 4:- anterior and posterior view of 3D cuts showing comminuted proximal humerus fracture dislocation anteriorly.

After medical stabilization she underwent smooth and uncomplicated open reduction and internal fixation, throughdeltopectoral approach and using locked plate (PHILOS).

Figure 5:-post-operative AP x-ray showing right humerus fracture fixed with locked plate (PHILOS).

Post-surgery she was kept in arm sling and neurovascular examination was intact, she completed her stay uneventfully and discharge 5th day post operatively.

Follow up
3 weeks follow up: patient seen, her wound healed and clips were removed, distal neurovascular intact.
X-ray showed severe inferior subluxation of the humeral head.

Figure 6:- AP x-ray of right shoulder showing severe inferior subluxation of the humeral head.

Patient was kept on arm sling and started physiotherapy (passive range of motion exercises)

5 weeks follow
uppatient neurovascular examinationwas intact, further examination showed no limitation in her passive ROM with significantlimitation in her active ROM .
continuation of severe inferior subluxation of the humeral head in as shown in previous x-ray image of the (3 weeks follow up) . patient started active ROM exercise ,static deltoid and Rotator cuff exercise and faradric electric stimulation

9 weeks follow up
showed persistence of her right deltoid atony , x-ray showing same picture of severe inferior subluxation of the humeral head.faradric electric stimulation started accompanied by strengtheningprogram.

16 weeks follow up:
she improved dramatically in regard of active range of motion and resolvement of the humeral head subluxation.

Figure 7 **Figure 8** **Figure 9**

Figure 7,8and 9:-showed complete resolvement of humeral head subluxation and marked fracture union.

Discussion:-

proximalhumerus fracture is common, fracture pattern,type,and patient factors will guide your management.
proximal humerus fracture dislocation is more difficult and challenging to the surgeon in managing such fractures,inferior hemeral head subluxation is common and can reach to 42% in the radiographic incidence among patients with proximal humerus fracture,

Radiographs made immediately after fracture of the humerus showed a 16% incidence of inferior subluxation. The inferior subluxation resolved by 6 weeks in 92% of patients with humeral fractures. (5)
However, treatment of inferior humeurs head subluxation require supporting the arm when not exercising and the initiating of isometric exercise, with no need for surgery or reduction maneuver. (5)

Conclusion:-

Inferior humoral head subluxation is common among patient who underwent surgical fixation of proximal humerus fracture. With estimated recovery period of 6 weeks in most cases

In our case due to the complexity of the injury we noticed prolonged period of subluxation reaching up to 3 months.

Reassurance of the patient and good quality rehabilitation program for such patients, will provide excellent outcome.

Acknowledgment:-

Written consent was obtained from patient

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