CASE REPORT OF COMPOUND COMMINUTED FRACTURE CLAVICLE WITH VEIN AND PLEURAL INJURY

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ABSTRACT: We report a case of compound segmental comminuted fracture of the Left clavicle, fracture of second rib, comminuted fracture of scapula with subclavian vein laceration and perforation of the parietal pleura and lung contusion that caused massive haemo-pneumothorax. Emergency exploration followed by repair of subclavian vein, pleura and fixation of clavicle were able to salvage the patient.
KEYWORDS: Clavicle fractures, haemopneumothorax, subclavian vein.

INTRODUCTION: Fracture clavicle is one of the common fracture. Usually it is treated conservatively. With severe trauma to clavicle and chest with nearby vessels poses grave situation of hemopneumothorax and shock.[1,2] This requires urgent exploration and control of bleeding along with chest management. These injuries needs multidisciplinary approach in a tertiary care center

CASE REPORT: 25 yr. old patient was involved in road accident. He fell from motor cycle. He sustained injuries to Left side of shoulder and chest. He was taken to a hospital where he was resuscitated; Left Intercostal Drain was put, for Haemopneumo thorax. About 1000 ml. of blood was drained. Patient was referred to our Institute.

On admission patient was in shock. He was found to have following injuries-

1. Open pneumothorax.
2. Compound segmental comminuted fracture left clavicle.
3. Fracture 2nd left Rib.
4. Comminuted fracture Scapula.
5. Subclavian vessel tear.
6. Pleural rupture.

Patient was resuscitated and was taken for emergency surgical exploration. Wound over clavicle was extended. He was found to have comminuted segmental fracture of left Clavicle. One bony piece had transected left subclavian vein completely. Upper pleura were ruptured completely. Left Lung was contused.

Debridement of wound was done after extending the wound. Subclavian vein was repaired after removing thrombus. Pleura were repaired. Fragments of clavicle were reduced and fixed with pre-contoured clavicular plate. Wound was closed in layers. Intercostal drain was continued and patient was monitored in I.C.U., without ventilator. Left arm was kept in shoulder immobilizer. I.C.D. was removed after 3 days. Post-operative period was uneventful. Patient was discharged after 5 days.

DISCUSSION: Clavicular fractures are usually innocuous, and heal well with conservative treatment. With high velocity force involving compound comminuted fractures of clavicle, ribs, scapula, pose grave danger of damaging inner vital structures like subclavian vessels, brachial plexus, pleura and lung tissue.[3] Patient is usually in shock and there is huge blood loss, along with haemopneumothorax. Usually blood goes into pleural cavity giving false impression that with pressure over open wound bleeding is controlled[4]. But patient in hypovolumic shock and with deteriorating pO2, there is need of urgent Exploration[4,5].

Patient has to be taken for Surgery immediately and Team of Cardio thoracic surgeon, orthopedic surgeon and general surgeon need to be available. Priority has to be given to control of bleeding and repair of torn vessels[5]. Pleura need to be closed with intercostals drain[5]. Fracture clavicle needs to be reduced and fixed. This sort of multi-disciplinary approach is essential to tackle these injuries. Management of these patients in I.C.U. is important along with intensive physiotherapy and higher antibiotics

CONCLUSION: In management of clavicular fractures, when it is associated with high velocity trauma involving visceral organ and vascular structures, needs multi-disciplinary approach at tertiary care center for good outcome.

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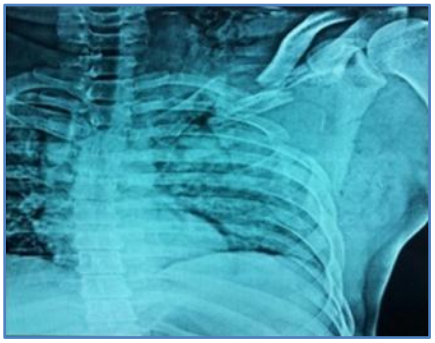

FIGURE 1

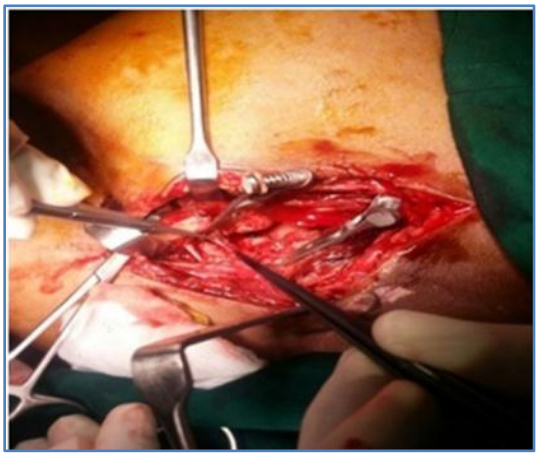

FIGURE 2

FIGURE 3

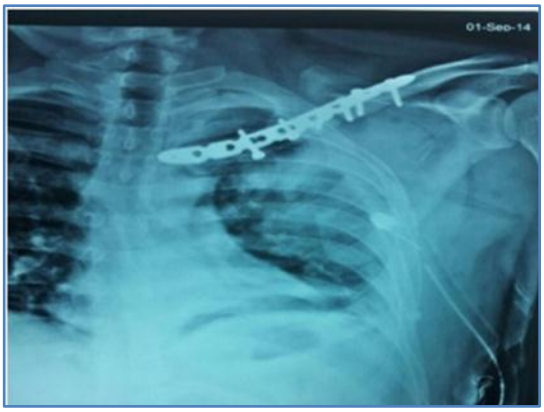

FIGURE 4

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