Challenges in Managing Coronal Split Fracture of the Vertebrae with Concomitant Left Hemothorax– a case report

Mohd Zaharial, MZ; Mohd Ghani, N
Orthopaedic Department, Hospital Raja Perempuan Zainab

INTRODUCTION:

According to AO spine thoracolumbar injury classification system, injury resulting in a split fracture in the coronal plane is classified as Type A2. Treatment includes operative or non-operative with orthosis. Several literatures proposed that these types of fractures should be treated operatively with posterior instrumentation with pedicle screws. However, some literatures describe that this type of fracture consolidates regardless type of treatment and pseudoarthrosis is uncommon. Anterior spine approach may be used in combination with posterior or alone. Problem may arise in translated coronal fractures with poor apposition of the fragments as satisfactory fracture healing may not occur.

REPORT :

A case of 30 years old male presented with history alleged motor vehicle accident and referred from district hospital for polytrauma involving intracranial bleed, left hemothorax and multiple thoracic fracture. CT and MRI showed multi level burst fracture of T7-T10 with displaced coronal split. Due to concomitant left hemothorax, intracranial bleeding complicated with nosocomial infection, operation was delayed for 15 days. Although imaging showed translated coronal fracture of thoracic vertebrae, it is decided to go for posterior instrumentation with pedicle screws and decompression. As initial neurology status was unknown as patient was intubated from the district hospital, neuromonitoring was used throughout the surgery.

Figure 1 : CT thorax 3D reconstruction

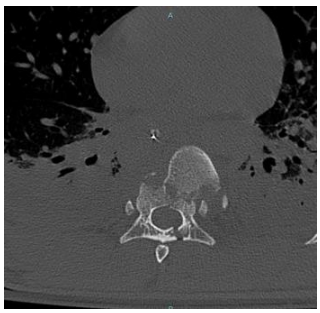

Figure 2: CT thorax showing translated coronal split of vertebrae

DISCUSSION:

In certain type of vertebrae fracture, there is always ongoing debate whether to go anterior or posterior approach alone or in combination of both in staged or sequential fashion. In this case, the decision is to go posterior approach only due to ongoing hemothorax which is a high risk of infection and further lung injuries. The main objective is to provide stability to the spine for future rehabilitation process.

REFERENCES:

1. De Boeck et al, SICOT 1999, 23:87-90
2. Hubner et al, Columna 2021; 20(2):127-31