FACTORS CONTRIBUTING ACUTE COMPARTMENT SYNDROME IN A FRACTURED ARM

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Introduction: Acute compartment syndrome (ACS) of the arm although rare, is a complication to be watched out. It is accounted six percentage in paediatrics age group.1 Early recognition and intervention is important to prevent disastrous complications.

Discussion: A 12-year-old girl presented with pain and deformity over the left arm after her hand was caught in a spinning washing machine with no signs of neurovascular injury. Radiograph showed comminuted distal third humerus fracture (Fig1A). Closed manipulated reduction, rush-rod insertion performed (Fig1B). Day 1 post-operatively, patient developed wrist drop and severe pain over the arm with blisters (Fig2A). A clinical diagnosis of ACS of the left arm was made. She underwent emergency fasciotomy, removal of the rush-rod and across elbow external fixation (Fig2B). Radial nerve was entrapped between the fracture fragments.

Conclusion: ACS of the arm is rare as the space between the compartments of the arm and shoulder girdle is large.1 It is important to stratify risky patient before surgical intervention to avoid ACS. Humerus fractures in pediatric can be treated conservatively, however in the event of ACS, emergent fasciotomy is warranted. We believed that the fracture severity with soft tissue trauma and intra-operative closed manipulation of the arm precipitated ACS in our patient. Moreover, extreme splinting position has been shown to increase compartment pressures. ACS and iatrogenic radial nerve palsy in this case presented late due to these added insult, whereby diagnosis was made promptly with surgical intervention.1 ACS of the arm should be considered as a possible complication of humerus fracture in a child, especially after closed manipulation. Urgent fasciotomy is warranted.