PP118 TINY CRYING HAND WITH A TINY FRACTURE: A MISSED COMPARTMENT SYNDROME

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INTRODUCTION

Acute compartment syndrome is an orthopedic emergency. Delay in diagnosis can lead to irreversible neuromuscular damage[1]. This case report emphasizes the importance of early recognition in preventing morbidity and permanent complications

CASE REPORT

A 7 years-old boy fell from his bicycle and sustained a closed buckle fracture of the left radius. He was brought to the emergency department (ED) on the same day. His peripheral pulses were intact. He was treated conservatively with below-elbow cast and an outpatient appointment to the orthopedic. Within a week, patient has returned to the ED twice due to the increasing pain over the left wrist. However, the medical officers discharged the patient with a back slab. On the 3rd visit, the compartment syndrome of left forearm was diagnosed and he underwent emergency fasciotomy. Currently, he is having a near malfunctioning left hand and irreversible neurological deficit

DISCUSSION

Compartment syndrome is a time-sensitive. Diagnosis can be made clinically[2]. In this case, compartment syndrome can rarely occur in buckle fracture hence it can contribute to the late detection. However, if in doubt, an intracompartmental measuring device should be used to aid in diagnosis. Study has suggested the use of continuous intracompartmental pressure monitoring as it has high sensitivity and specificity[3]. Newer technology has been developed, such as near infrared spectroscopy which works on the same principles as pulse oximetry. This could potentially predict neuromuscular ischemia better than compartment perfusion pressure[4]

CONCLUSION

The need for an objective measurement as an aid in determining an acute compartment syndrome is highly suggested along with an excellent clinical assessment. The direct measurement of compartment pressures will definitely rule-in or rule the diagnosis[4]. A high suspicion remains the cornerstone of diagnosing compartment syndrome.