FORGOTTEN TECHNIQUE FOR ANGULATED TIBIA SHAFT FRACTURE IN DISTRICT HOSPITAL - A CASE REPORT

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Introduction: Tibial shaft fracture is one of the common fracture that encounter by doctors in district hospitals. Most of fractures are angulated and unable to reduce via closed manipulation (CMR) to achieve desire reduction for union. Failed CMR, increased the rate of surgical interventions. Cast wedging is one of the traditional technique that were long forgotten nowadays. It is very useful technique especially in pediatric orthopaedics to correct fracture malalignments [1].

Discussion: 27 year old, Indonesian, gentleman alleged motor-vehicle accident sustained closed fracture mid-shaft of right tibia and fibula. CMR done and above knee plaster of paris (POP) applied. Post CMR x-ray not acceptable (> 10 degree posterior angulation). Proceed with wedging technique, 1 week later. A 5 steps open wedging technique was used to obtain the measurement [1]. Then the wedge secured by applying cotton packing and cast wrapping filling the gap. Post wedging x-ray showed successful correction of deformity (< 5 degree)

Conclusion: Based on this case report, strongly recommend that cast wedging is still a reliable technique to achieve the desire length, axis and rotation of the fractured bone for union. Study done by Lawrence Wells et al. [1] proved that 10 out of 15 fractures casted obtain a post wedge angulation of less than 5 degree. Nathan A. Jacobson et al. [2] mentioned that cast wedging technique is very economical way obtaining good reduction of long bone fractures and able to avoid complications of anesthesia and operative procedures. S Gaukel et al. [3] observed success in 280 out of 316 paediatric patients who underwent cast wedging. Cast wedging technique is very useful and able to minimize operative indications and complications. Further study involving larger number of patients is required to obtain more data regarding cast wedging technique for angulation deformity of long bones.