Elbow Fracture Dislocations

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The management of complex elbow fracture dislocations has been evolving over the past decade. Many of these injuries are called ‘terrible triad’ due to the difficulty in restoring adequate stability of the elbow. There is now a better understanding of the factors affecting stability of the elbow joint. The contributions of bony and ligamentous components of the elbow joint are crucial in maintaining joint congruity and restoring optimal function. Stabilizers of the elbow have been addressed by the ‘ring’ concept.

The anterior column comprises the bony buttress by the radial head and the coronoid. As a result, excision of the radial head is not widely practiced now as it would lead to re-dislocation of elbow joint. While preserving a radial head either by fixation or replacement is important, it is now known that fixing coronoid fragment, even when small, is also crucial in maintaining stability of the elbow. Fracture of the coronoid signifies severe potential instability and it needs to be addressed. O’Driscoll developed a classification of coronoid fracture to help better understanding of the injury and aid surgeons in planning approach and fixation. The entire construct may then be augmented with a hinged external fixator if there is persistent instability.

The posterior olecranon fracture dislocations represent a proximal type of posterior Monteggia injury and is highly unstable variant. Approach via a posterior approach through the fracture has been used to treat these injuries.