Chapter 7

Compression Fractures of the Articular Surface
Compression fractures of the distal radius are injuries whose major feature is impaction of the subchondral and metaphyseal cancellous bone in concert with disruption of the distal radius articular surface (Fig. 7.1). In some instances restoration of the articular disruption is readily achieved by applying longitudinal tension on the radiocarpal ligaments, whereas in other instances disimpaction of the cartilage-bearing fragments may require operative reduction with replacement of the metaphyseal bony defect with a bone graft.

**Historical Perspective**

Much of the efforts of early investigators focused on refining the original descriptions of Petit, Pouteau, and Colles, who primarily described bending-type fractures (see Chapter 1). Given the fact that for most of the nineteenth century fracture patterns were established based on postmortem specimens, it is interesting to observe descriptions of compression-type fractures dating back as early as 1842 when Voillemier described such an injury in a patient who died 4 hours after falling from a three-story height. Calleddar in 1865 reported similar patterns in specimens housed in the museums of the London Hospital and St. Bartholomew's Hospital. In 1904 Cotton identified many of the contemporary subclassifications of impaction injuries he found in specimens at the Massachusetts General Hospital (Fig. 7.2). With