

Value of bone scintigraphy in patients with carpal trauma

Ümit Ö. AKDEMİR,* Tamer ATASEVER,* Serkan SİPAHIOĞLU,** Şeyda TÜRKÖLMEZ,*
Cemal KAZIMOĞLU** and Ertugrul ŞENER**

*Department of Nuclear Medicine, Gazi University Medical Faculty, Ankara, Turkey

**Department of Orthopedics, Gazi University Medical Faculty, Ankara, Turkey

Objective: We planned this study to evaluate the role of bone scintigraphy in patients with suspected carpal fracture and normal or suspicious radiographs following carpal injury. **Methods:** Three-phase bone scintigraphy using Tc-99m-MDP was performed on 32 patients with negative radiographs but clinically suspected fracture at two weeks after the trauma. Focally increased radiopharmaceutical uptake was interpreted as a fracture. The final diagnosis was established with clinical follow-up. **Results:** Twelve (38%) patients had a normal scan excluding fracture. Twelve patients had a single fracture. Multifocal fracture was present in 8 (25%) patients. Eight patients showed scaphoid fractures; of these three showed single scaphoid fracture, and the other five patients revealed accompanying fractures. Distal radius fractures and carpal bone fractures other than scaphoid were both observed in 12 patients. These were eleven fractures of distal radius; three fractures of pisiform; two fractures of hamate; and single fractures of lunate, trapezium and triquetrum. In one patient there was fracture of a first metacarpal bone. **Conclusion:** In patients with suspected carpal bone fracture and normal or suspicious radiographs, bone scintigraphy can be used as a reliable method to confirm or exclude the presence of a scaphoid fracture and to detect clinically unsuspected fractures of distal radius and other carpal bones.

Key words: bone scintigraphy, carpal trauma, fracture