Range of Motion Exercises based on Ultrasonographic Assessment of Heterotopic Ossification after Supracondylar Fracture of the Femur

Yoshikazu HIRASAWA, PT, Hiroshi YAMAMOTO, PT, Takahiro FUJIMORI, PT,
Yutaka KATAOKA, MD
Department of Rehabilitation, Kansai Electric Power Hospital

Purpose: To report the performance of range of motion exercises based on ultrasonographic assessment of heterotopic ossification after supracondylar fracture of the femur.

Methods: The subject was a woman in her sixties with a supracondylar fracture of the femur. We performed ultrasonography to investigate a mass that developed medial to the patella postoperatively.

Results: No ossification was detected by radiographic examination at 1 month postoperatively. Ultrasonography showed that the mass was a hematoma with hyperechoic and hypoechoic regions. The hyperechoic regions seemed to be callus. The hematoma was located in the pre-femoral fat pad between the femur and the vastus medialis muscle, and was adherent to vastus medialis. Ossification was detected by radiography at 2 months postoperatively. Ultrasonography showed that the ossification was continuous with the femur and there was breakdown of the adhesions with vastus medialis. Range of motion exercises were continued until knee flexion of 155 degrees were achieved.

Conclusions: We could assess the progression and extent of heterotopic ossification and could judge the performance of range of motion exercises by ultrasonography.