A 62-year-old male complained of generalized muscle weakness and pain. He had undergone percutaneous coronary intervention 1 month ago to treat ST-segment elevation myocardial infarction (STEMI). His levels of aspartate/alanine aminotransferase (AST/ALT), creatine kinase (CK), and myoglobin were markedly elevated: AST 1,323 (reference 10–37 U/L), ALT 476 (10–37 U/L), CK 52,784 (0–170 U/L), and myoglobin >20,000 (0–110 U/L). His renal function assessed via glomerular filtration rate calculation had deteriorated from 63 to 27 mL/min/1.73 m². The patient was diagnosed as rhabdomyolysis and underwent immediate massive hydration. On hospital day 5, bone scintigraphy employing Tc-99m hydroxymethane diphophonate was performed; the blood pooling images revealed increased radioisotope uptake by both upper extremities and the thigh muscles (Figure 1). The patient had been prescribed a high-intensity statin (atorvastatin 40 mg/day) after STEMI treatment. After hydration and atorvastatin cessation, the CK and myoglobin levels gradually decreased.

Figure 1. Bone scintigraphy using Tc-99m hydroxymethane diphophonate revealed increased radioisotope uptake in both upper extremities and thigh muscles at blood pooling image.
On hospital day 20, the patient was discharged without muscular symptoms. The CK and myoglobin levels at discharge were 351 (reference 0–170 U/L) and 235 (0–110 U/L), respectively. The renal function and the AST/ALT levels were normalized. We prescribed pitavastatin 2 mg/day and ezetimibe 10 mg/day to replace the high-intensity statin.

Rhabdomyolysis is the worst form of statin-related myopathy, which is very rare. Diagnosis is based on the clinical situation and laboratory data, but bone scintigraphy using a bone-specific tracer can also be helpful to establish the diagnosis of rhabdomyolysis. Especially, bone scintigraphy can distinguish non-traumatic rhabdomyolysis (such as statin-induced rhabdomyolysis) from traumatic rhabdomyolysis.

REFERENCES

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