

Pregabalin-induced rhabdomyolysis in hemodialysis patient

Dong Eon Kim¹ and Sang Heon Song^{1,2}

¹Department of Internal Medicine and Biomedical Research Institute, Pusan National University Hospital, Busan; ²Department of Internal Medicine, Pusan National University School of Medicine, Yangsan, Korea

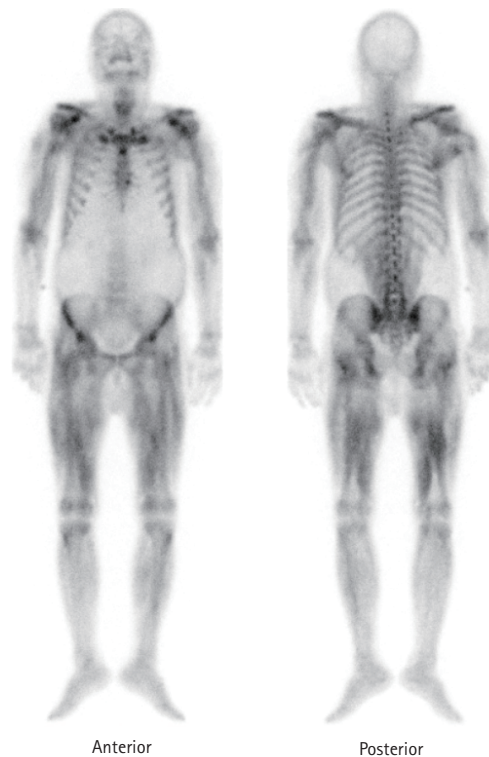


Figure 1. The ^{99m}Tc-DPD bone scintigraphy revealed that diffuse and heterogeneous muscular tracer uptake in the bilateral upper extremities, thighs, psoas muscle and neck. ^{99m}Tc-DPD, technetium-99 m-labeled 2,3-dicarboxypropane-1,1-diphosphonate.

A 63-year-old male on hemodialysis, presented to the emergency department with bilateral thigh pain and weakness. He had been taking pregabalin 50mg once daily for uremic pruritus at the local dialysis center. He recently visited the dermatology clinic for worsening symptoms and added 75mg of pregabalin to his daily dose, for a total of 125 mg per day. After three days, he developed bilateral thigh tenderness and weakness. Laboratory findings showed elevated levels of creatinine kinase at 17,036 U/L (reference range: 5–217 U/L) and myoglobin > 20,000 ng/mL (refer-

ence range: 3–110 ng/mL). To assess the extent of muscle damage, the ^{99m}Tc-DPD bone scintigraphy was performed and revealed that diffuse muscular tracer uptake on bilateral upper extremities and thighs (Fig. 1), suggesting rhabdomyolysis. Daily hemodialysis with a medium cut-off membrane was performed for one week to relieve symptoms. His lower extremity pain and weakness gradually improved and creatinine kinase and myoglobin levels dropped over 194 U/L and 659.8 ng/mL, respectively.

The mechanism of pregabalin-induced myopathy is un-

certain. Pregabalin is a gamma-aminobutyric acid analogue used for neuropathic pain. It acts in the central nervous system by binding to the alpha2-delta subunit of voltage-dependent calcium channels. Plasma concentration of pregabalin is reached in approximately 24–48 hours, and 98% is eliminated by the kidney. In this case, the patient had been taking rosuvastatin 20 mg daily for a long time without any adverse effects. Concomitant use of drugs that inhibit cytochrome P450 and statins is known to increase the risk of rhabdomyolysis. However, as pregabalin does not inhibit cytochrome P450, the likelihood of statin-induced rhabdomyolysis is considered low. This case suggests that pregabalin should be used with caution in patients on hemodialysis as they are at increased risk of overdose, although it has been reported that up to 60% of pregabalin is removed by hemodialysis.

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Correspondence to

Sang Heon Song, M.D., Ph.D.

Department of Internal Medicine and Biomedical Research Institute,
Pusan National University Hospital, 179, Gudeok-ro, Seo-gu, Busan
49241, Korea

Tel: +82-51-240-7875, Fax: +82-51-240-6856

E-mail: shsong0209@gmail.com

<https://orcid.org/0000-0002-8218-6974>

CRedit authorship contributions

Dong Eon Kim: data curation, writing - review & editing; Sang Heon Song: conceptualization, writing - review & editing

Conflicts of interest

The authors disclose no conflicts.

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