Acute rhabdomyolysis after high-dose chemotherapy and circulating progenitor cell autografting for breast cancer

We describe a case of acute rhabdomyolysis developing after high-dose chemotherapy followed by circulating progenitor cell (CPC) transplantation in a woman with breast cancer treated in an adjuvant setting for high risk disease, who recovered completely.

Sir,
drug overdose, seizure and infection may be associated with non-traumatic rhabdomyolysis.1,2 This feature has also been described in association with the administration of lovastatin in cardiac transplant recipients3 and after interleukin-2, interferon-α and chemotherapy for melanoma.4 We describe a case of acute rhabdomyolysis occurring in the setting of high-dose chemotherapy that patient had virtually parietic lower limbs with persisting profound muscle weakness. Chest radiography was normal as was cardiac and renal function.

Muscle enzymes and K+ normalized by day +16. The finding of urinary myoglobin confirmed the diagnosis of acute rhabdomyolysis. Therapy with additional fluids and K+ was initiated, by day +7. Within 48 hours after the diagnosis of rhabdomyolysis, the patient had virtually parietic lower limbs with persisting profound muscle weakness. Respiratory function was severely impaired. Chest radiography was normal as was cardiac and renal function.

Muscule enzymes and K+ normalized by day +16. The patient was discharged on day +23 and remained bed-bound for 2 months, but with intensive physical therapy her general clinical condition gradually improved.

Eighteen months after CPC transplantation, she has no functional disturbance of the lower limbs.

Rhabdomyolysis is a rare complication of hematopoietic stem cell autologous transplant.5,7 Potentially rhabdomyolic viruses include CMV, influenza A, coxackie A9 and B5, Epstein-Barr virus, adenovirus 21, parainfluenza and Echo 9.8 Bacterial and fungal infections may also be involved. No microbiological cultures were positive in our patient, and there was no serologic evidence of viral infection. We have, therefore, postulated on the basis of a temporal relationship that the rhabdomyolysis was caused by a direct iatrogenic myotoxic effect, triggered by vancomycin.

The case described highlights that acute rhabdomyolysis should be considered when managing cancer patients treated with similar high-dose chemotherapy programs who develop severe myalgia.

Key words
Rhabdomyolysis, breast cancer, high-dose chemotherapy, circulating progenitor cell support.

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