Various complications during infusion of cryopreserved cells have been described however DMSO related neurotoxicity has been reported mostly as anecdotal events including reversible encephalopathy, seizures, transient global amnesia. Here we report a case of DMSO neurotoxicity who presented with autonomic neuropathy. A PBSC collection was performed in a 63-year-old multiple myeloma patient (4x10^6/kg CD34+ cells). The cells were cryopreserved in 7.5% DMSO (OriGen CryoPur) + 6% HES using a controlled-rate freezer (Planer Cryo 250) and stored at -196°C in a liquid nitrogen tank. The final volume cryopreserved was 980 ml in 7 bags with approximately 10.4 ml of DMSO per bag. Following melphalan (200 mg/m2) conditioning regimen the patient underwent stem cell infusion. All the 7 bags were infused sequentially without any early adverse event. A few hours after the infusion the patient reported dizziness and bed rest was initiated. His complaint did not resolve and neurological consultation was required. During examination when he stood up he lost conscious for a short time then vomited. Transient bradycardia was detected. Neurological examination revealed shortening of vibration sense and orthostatism. Cranial MR was normal. Cardiac evaluation revealed no pathology. The patient could not tolerate positional vertical elevation even sitting. Every attempt resulted in clinical symptomatic hypotension. Absolute bed rest was continued. This lasted for 10 days. The patient improved gradually. In the absence of other causes we attributed the situation to DMSO toxicity. Sequential infusion of the products may explain this extraordinary DMSO side effect.