

High-Dose Furosemide and Small-Volume Hypertonic Saline Solution Infusion for the Treatment of Leg Edema in Advanced Cancer Patients

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Reference: *Sebastiano Mercadante, MD, Patrizia Villari, MD, Patrizia Ferrera, MD, Fabrizio David, MD, and Giuseppe Intravaia, RN*
J Pain Symptom Manage 2009;37:419e423.

Abstract:

Peripheral edema is a common feature in populations with advanced cancer, although it is seldom recognized. Diuretics are commonly employed and may show some benefit, but there are insufficient clinical trial data to draw useful conclusions about their clinical use. The aim of this prospective study was to evaluate the efficacy and tolerability of high-dose furosemide and small-volume hypertonic saline solution infusion in reducing leg edema in patients with advanced cancer treated unsuccessfully with diuretics. A prospective study was performed in a consecutive sample of 24 patients admitted to a pain relief and palliative care unit over a period of 18 months. To be eligible to enter the trial, advanced cancer patients had to have diffuse bilateral leg edema unresponsive to common doses of diuretics. A solution of 60 mEq of NaCl, 250 mg of furosemide, and 150 mL of normal saline were infused over 20 minutes. The treatment was repeated twice a day for two days and eventually continued on the basis of the clinical outcome. Circumferences were measured at the foot, ankle, calf, and thigh before starting the treatment (T0) and at intervals of 24 hours (T1 and so on). At the same intervals, diuresis was determined. Patients were asked to score their sensation of leg weakness/heaviness on a numerical scale from 0 to 10, before (T0) and after the treatment (Tend). An appreciable improvement in the sensation of weakness/heaviness (score reduction of at least two points) was recorded in all the patients. A small decrease in leg circumferences at the different sites was found, and a mean of 3600 mL/day of diuresis was recorded. These observations suggest that high-dose furosemide and small-volume saline may be an effective strategy for the treatment of peripheral edema in patients with advanced cancer.

Strengths: Clinical relevance of common problem in palliative care with a quantitative assessment of improvement.

Weaknesses: The weaknesses of this study include: a) study design (not an RCT with no control, blinding, etc), b) study size (24 patients, with data only on 18), c) the complete lack of demographics on patients included in the study other than their age, sex and type of cancer (ie no information on co-morbidities), d) Lack of data on the kidney function of patients, e) Lack of information on the objective instruments used to measure outcomes, f) incomplete data on follow up, g) suspicious adverse reaction information (no adverse events, yet little data on follow up)

Relevance to PC: Pedal edema is a not an uncommon problem in palliative care. There are few effective treatments for this problem (outside of CHF). This study provides limited data on a potential treatment that may be potentially useful in select patients. More research is necessary.