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# The Medical Letter®

## on Drugs and Therapeutics

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### IN BRIEF

## **Furoscix – A Subcutaneous Furosemide Infusor for Heart Failure**

The FDA has approved *Furoscix* (scPharmaceuticals), a subcutaneous formulation of the loop diuretic furosemide administered via a single-use, on-body infusor, for treatment of congestion due to fluid overload in adults with New York Heart Association (NYHA) Class II-III chronic heart failure (HF). Furosemide (*Lasix*, and generics) has been available for years in oral and IV formulations.

#### Pronunciation and Abbreviation Key

Furosemide: fure oh' se mide      *Furoscix*: fue roe' six  
HF: heart failure

**DIURETICS IN HF** – Diuretics can reduce fluid retention in patients with HF, but their effect on survival is unclear. Loop diuretics such as furosemide, bumetanide, and torsemide are more effective than thiazide-type diuretics, such as hydrochlorothiazide, for this indication. Intravenous administration of loop diuretics is often used to achieve rapid diuresis in acute decompensation or to overcome diuretic resistance.<sup>1</sup>

**EFFICACY AND SAFETY** – FDA approval of the of the new formulation was based on the results of a study demonstrating that the bioavailability of *Furoscix* (30 mg SC infusion over 1 hour, followed by 12.5 mg/hour for the next 4 hours) was 99.6% relative to IV furosemide (two 40-mg bolus doses separated by 2 hours) and that it produced equivalent diuresis.<sup>2</sup> The most common adverse effects with the SC infusion were administration-site erythema, bruising, edema, and pain.

An unpublished trial (FREEDOM-HF) in 24 patients presenting to the emergency department with worsening NYHA Class II or III HF compared outpatient use of *Furoscix* to hospital admission for IV diuresis in

66 matched controls. According to the manufacturer, no patients in the *Furoscix* group required an initial heart failure hospital admission and 96% of *Furoscix*-treated patients remained out of the hospital for 30 days after treatment. HF-associated healthcare costs were significantly lower in the *Furoscix* group.<sup>3</sup>

**DOSAGE, ADMINISTRATION, AND COST** – *Furoscix* should not be used for emergency situations or in patients with acute pulmonary edema. It is also not indicated for chronic use; patients should be switched to oral diuretic therapy as soon as practical.

*Furoscix* is supplied as a single-use, subcutaneous on-body infusor copackaged with a prefilled cartridge containing an 80 mg/10 mL pH neutral solution of furosemide. The device is pre-programmed to deliver a total of 80 mg of furosemide (30 mg over the first hour, followed by 12.5 mg per hour for the subsequent 4 hours).

After loading the prefilled cartridge into the infusor, the patient should place the device on an area of clean, dry skin on either side of the navel. Pressing the start button on the infusor initiates the subcutaneous infusion. Activity should be limited for the duration of the infusion. The on-body infusor should be kept dry and should not be used within 12 inches of mobile phones, tablets, computers, or wireless accessories. The approximate cost for one on-body infusor and prefilled cartridge is \$822.<sup>4</sup> ■

1. Drugs for chronic heart failure. *Med Lett Drugs Ther* 2021; 63:89.
2. DA Sica et al. Subcutaneous furosemide in heart failure: pharmacokinetic characteristics of a newly buffered solution. *JACC Basic Transl Sci* 2018; 3:25.
3. NIH. *Furoscix* real-world evaluation for decreasing hospital admissions in heart failure (FREEDOM-HF). Available at: <https://bit.ly/3HhsW2M>. Accessed January 5, 2023.
4. Approximate WAC. WAC = wholesaler acquisition cost or manufacturer's published price to wholesalers; WAC represents a published catalogue or list price and may not represent an actual transactional price. Source: Analysource® Monthly. January 5, 2023. Reprinted with permission by First Databank, Inc. All rights reserved. ©2023. [www.fdbhealth.com/policies/drug-pricing-policy](http://www.fdbhealth.com/policies/drug-pricing-policy).

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