

Background

A 50-year-old female with NYHA Class II/III heart failure (HF) with left ventricular ejection fraction of 73% and a history of aortic and mitral valve repair was discharged from an HF-related hospital stay. The patient was taught to take SOZO measurements at home, and data were collected on SOZO for 59-days. The patient and investigators were blinded to the data during the observation period.

SOZO shows response to medication changes.

Observations

- 1 HF-Dex 50.1% after hospital discharge; note equal volume measurements for ECF and ICF
- 2 HF-Dex declines with bumetanide dose escalation
- 3 Patient continues to experience symptoms and HF-Dex continues to decrease following more aggressive diuretics
- 4 Patient stabilizes and is symptom free when HF-Dex reaches 43.9%

Conclusions

SOZO offers an objective measure of fluid in HF patients that is not visible with weight alone. HF-Dex and ECF volume decreased in response to bumetanide escalation and metolazone therapy. Throughout the observation period, HF-Dex and ECF volume decreased by 12.4% and 13.9%, respectively, whereas weight only fell by 0.7%. HF-Dex and ECF showed response to medication changes when weight did not.

SOZO Objective Fluid Volume Outputs

Total body water (TBW)	Extracellular fluid (ECF)
Intracellular fluid (ICF)	ECF%TBW (HF-Dex)
HF-Dex Reference Ranges	
— 51% HF-dex	Fluid Overload
Elevated Fluid Volumes	Normal Fluid Volumes

Changes in HF-Dex, ECF, and weight during observation period

	HF-Dex (%)	ECF (L)	Weight (kg)
Study initiation 19-Mar-2019	50.1	15.1	70.9
Clinical stability 14-May-2019	43.9	13.0	70.2
Change	-6.2	-2.1	-0.7
% Change	-12.4%	-13.9%	-0.7%

Baseline HF meds: bumetanide 3 mg po bid, metoprolol 25 mg po bid, digoxin 125 mcg po qd, sildenafil 12.5 mg po qd

