

## عنوان مقاله:

Can fractional excretion of sodium predict worsening of renal function, in-hospital mortality, and length of hospital stay  
?in acute decompensated heart failure

## محل انتشار:

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## خلاصه مقاله:

**BACKGROUND:** Fractional excretion of sodium (FENa), the reflection of sodium (Na) handling by the kidney during natriuresis, is influenced by exo- and endogenous factors that have a powerful impact on renal function. We performed this study to define the correlation between FENa and worsening renal function (WRF) and assess the value of FENa in the length of hospital stay and in-hospital mortality in the patients with acute decompensated heart failure (ADHF). **METHODS:** This prospective observational study was performed in two tertiary governmental heart centers located in Ahvaz, Iran, from March ۲۰۱۹ to March ۲۰۲۰. Any individual suffering from ADHF who had no renal failure, received only loop diuretics, and was on a low Na diet was eligible for recruitment in this study. The urine sample used to calculate FENa was a ۲۴-hour sample. **RESULTS:** Over the one year, ۵۶ patients met the inclusion criteria. The total study population had a mean age of  $۶۱.۴۶ \pm ۱۴.۲۲$  years with the dominance of women (۵۱.۸%). The mean age of men and women was  $۵۸.۵۹ \pm ۱۴.۳۵$  and  $۶۴.۱۳ \pm ۱۳.۸۰$  years, respectively. During hospitalization, ۱۳ (۲۳.۲%) patients experienced WRF. In patients who experienced WRF during hospitalization, FENa of  $< ۱\%$  was mostly observed compared to FENa of ۱%-۲% (۴۲.۹% vs. ۰%,  $P < ۰.۰۵$ ). Post-hoc test of data on mean hospitalization days indicated that those with lower FENa had longer admission periods than those with other FENa groups ( $< ۱\%$ :  $۳.۰۴ \pm ۱.۰۲$  days vs. ۱%-۲%:  $۱.۵۸ \pm ۰.۶۶$  days,  $P < ۰.۰۰۱$  and  $< ۱\%$ :  $۳.۰۴ \pm ۱.۰۲$  days vs.  $> ۲\%$ :  $۲.۳۰ \pm ۰.۹۲$  days,  $P = ۰.۰۲$ ). There was no significant relation in terms of in-hospital death across different categories of FENa ( $P = ۰.۶۹$ ). **CONCLUSION:** Our data suggested that FENa less than ۱% was associated with WRF and could be associated with a longer hospitalization period. We did not find any association between FENa and in-hospital mortality. Further studies with a larger number of patients are required to determine the cut-off value.

**کلمات کلیدی:**

Sodium, Heart Failure, Kidney, Hospitalization

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