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# Effects of Obesity on Patients Undergoing CardioMEMs Procedure: Retrospective Cohort Study

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# Effects of Obesity on Patients Undergoing CardioMEMs Procedure: Retrospective Cohort Study

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## Background

- ★ Remote hemodynamic monitoring (CardioMEMs) is becoming increasingly important for management of chronic heart failure patients.
- ★ There is limited data looking specifically for obese patients who undergo CardioMEMs implantation.
- ★ We sought to examine the national inpatient sample database to describe in-hospital outcomes for this demographic

## Methods

- ★ Data were extracted from the National Inpatient Sample (NIS) Database for the years 2019 and 2020.
- ★ The NIS was searched for hospitalizations of adult patients who underwent hemodynamic telemonitoring devices implantation.
- ★ Out of this Cohort, obese patients were identified. Multivariate logistics were used to adjust for confounders.
- ★ The primary outcome was inpatient mortality.
- ★ Secondary outcomes were hospital length of stay (LOS), and total hospital charges (TOTHCG). SPSS software was used for statistical analysis.

## Results

- ★ This study included 7183 patients who underwent hemodynamic telemonitoring, of which 1224 (17%) patients were obese.
- ★ The obese cohort Patients had higher prevalence of hypertension (30.3% Vs 27.5%  $p < 0.001$ ), chronic kidney disease (15.6% Vs 12.3%  $p < 0.001$ ), and diabetes mellitus (20.5% Vs 15.5%  $p < 0.001$ ).
- ★ In-hospital mortality was higher among the obese patients (16.2 % Vs 15.2  $p < 0.001$ ).
- ★ Multivariate regression showed that obese patients who underwent CardioMEMs procedure had higher inpatient mortality (OR 1.120, CI 1.097-1.143  $p < 0.001$ ).
- ★ Obese patients who underwent CardioMEMs had higher total hospital charges and longer length of stay but were not statistically significant.
- ★ On secondary analysis it has shown that obesity had higher odds of having CHF exacerbation (OR 1.189, CI 1.173-1.205,  $p < 0.001$ ), cardiogenic shock (OR 1.150, CI 1.134-1.167,  $p < 0.001$ ), arrhythmias (OR 1.176, CI 1.159 -2.120  $p < 0.001$ ) and acute kidney injury (OR 1.157, CI 1.805-1.189,  $p < 0.001$ )

## Conclusions

- ★ In this nationally representative population-based retrospective cohort study, **obesity was associated with higher mortality and worse outcomes among patients who underwent hemodynamic telemonitoring.**