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## **Prevalence of heart failure in Menoufia University cardiac intensive care unit**

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**Background:** Cardiac Care Unit (CCU) is increasingly becoming a very vital part of management of critically ill patients. There is limited information about the prevalence of Heart Failure (HF) and their outcome in this critical population.

**Objectives:** This registry represents data from CCU of Menoufia University Hospital, as representative to tertiary academic centre in Egypt, and provide an epidemiological snapshot of the HF patients, their risk profile and their short-term outcome during hospital stay.

**Methods:** This is a local single center cross sectional observational registry of patients admitted to CCU one year from July 2015 to July 2016. Data were collected through special software programme. This registry includes the data of 1006 patients admitted to the CCU. Patients with clinical and laboratory evidence of HF were systematically studied.

**Results:** Our registry showed that the prevalence of HF was 29.4% of the total CCU admissions. 72.7% were Heart Failure with reduced Ejection Fraction (HFrEF) and 27.3% were Heart Failure with preserved Ejection Fraction (HFpEF) Male patients were the most prevalent (60.1%) with mean age (60.4±10). Hypertension and obesity (59.5%, 54.4%) were the commonest Cardiovascular risk factors in HF patients followed by smoking (41.2%). Diabetes was prevalent in 40.2% and dyslipidemia in 35.8% of patients. Cardiogenic shock was existing in 21.62% (n=64) of HF patients followed by atrial fib/flutter (15.5%, n=46). Acute Coronary Syndrome (ACS) patients was the underlying etiology of HF in 26.7% (n=79). 13.2% of HF patients had prior PCI, 7.8% had Coronary Artery Bypass Surgery (CABG), 3.7% had prior valve surgery. History of prior admission to the hospital was existing in 87.4%. Left Bundle Branch Block (LBBB) was the commonest ECG findings in 24.6%, followed by Atrial Flutter (AF) (22.3%). Ischemic ECG changes were more prevalent in HFrEF type (21%), while voltage criteria were most prevalent in HFpEF type (12.5%). On ECHO examinations, HFrEF showed higher prevalence of severe mitral and tricuspid regurg and higher prevalence of Regional Wall Motion Abnormalities (RWMA). Duration of hospital stay was much higher in HF group, specially in HFrEF type with mean value of 8.91±7. During in-hospital course, HF mortality was 25.7% of the total CCU mortality. Moreover, HFrEF mortality represented 94.4% of HF mortality. Using multivariate regression analysis, the presence of hypertension doubles (2.1; IC at 95%: 1.16-3.76) probability to develop HF, compared to its absence. LBBB and AF increase the likelihood to develop HF by 7 times, each mm decrease in Left Atrium (LA) size reduces the odds of heart failure by 6% (Odds ratio 0.94; IC at 95% 0.9-0.98), each one time decrease in incidence in ACS reduce the probability of HF incidence by 15%.

**Conclusion:** HF is the primary reasons for admission into the CCU in 30 % of cases. Acute coronary syndrome is the commonest etiology of HF. Mortality among CCU patient was comparable to reports elsewhere. Hypertension, AF and LBBB are independent predictors of HF in such populations.

### **Biography**

Marwa Ahmed Elgharably is a Cardiology specialist in the Egyptian ministry of health. She did her research work in Menoufia university hospital, Egypt.

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