Use of Potential Heart Failure-Exacerbating Medications among Heart Failure Patients in Tertiary Referral Centre in Malaysia

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Background

Use of inappropriate drugs such as anti-arrhythmic agents and calcium channel blockers has been identified as one of the factors contributing to heart failure exacerbation. [1] In 2016, the American Heart Association (AHA) released a scientific statement consists of list of drugs that may exacerbate heart failure.[2] Literature review showed the prevalence of potential harmful drug prescription was ranging from 25% to 48% among heart failure adults. [3,4,5,6,7] However, the prevalence of these medications prescribed to heart failure patients in Malaysia is unknown.

Objective

The study aimed to evaluate the prevalence of the use of potential heart failure exacerbating medications among heart failure patients prior to admission, during admission and at discharge and to identify the common potential heart failure-exacerbating medications prescribed among heart failure patients.

Method

Study data was collected retrospectively from the heart failure admissions in 2 tertiary referral centres between May 2020 and December 2020 based on the inclusion criteria.
The inclusion criteria was shown as below.

- Patients admitted to tertiary hospital with primary diagnosis of heart failure
- Patients with ejection fraction <50%
- Patients age >18 years old

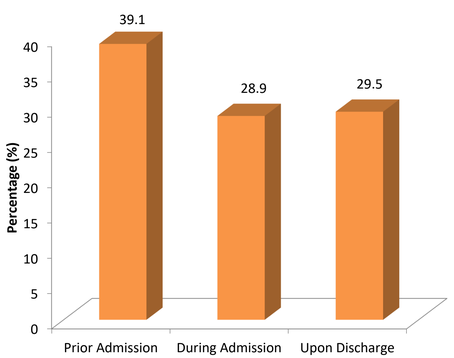
Result

A total of 166 heart failure admissions were included in the study. There were 72.9% male patients. The patients' mean age was 57.6 years old. Among these admissions, three quarters of patients had hypertension and half of them had diabetes.

Out of 166 admissions, 19 patients passed away. The average length of hospital stay was 6.31 days.

The prevalence of using medications with potential to exacerbate heart failure prior to admission was 39.1%, 28.9% during admission and 29.5% upon discharge.

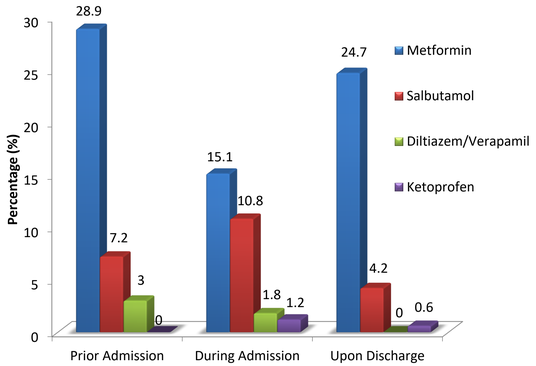
Prevalence of Using Potential Heart Failure-Exacerbating Medications



Metformin was the most common prescribed potential harmful medications prior to admission, followed by salbutamol, diltiazem and verapamil. Similarly, at discharge, metformin was the most prescribed potential heart failure-exacerbating drug

However, the prevalence of prescribing both metformin and salbutamol were reduced between admission and discharge where for metformin, the prevalence was reduced from 28.9% to 24.7% and salbutamol was reduced from 7.2% to 4.2%.

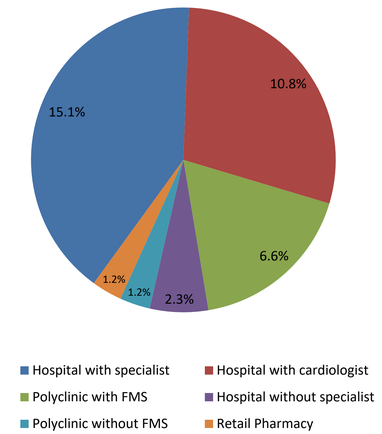
Potential Heart Failure-Exacerbating Medications Prescribed



The study found majority of prescribed potential heart failure-exacerbating medications was from hospital with specialist followed by hospital with cardiologist.

Lastly, patients with diabetes were associated with higher risk of being prescribed with potential heart failure-exacerbating medications.

Source of Prescribed Potential Heart Failure-Exacerbating Medications



Conclusion

More than a quarter of patients was prescribed with potential heart failure exacerbating medication upon discharge. Implementation of safe prescribing practice in heart failure treatment care plan is essential for this group of patients.

Reference

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