

Abstract

Cardiovascular diseases (CVD) are the commonest non communicable disease (NCD) in Sri Lanka. The disease burden of CVD is increasing partly due to epidemiological transition. Essential cardiovascular (CV) medicines play a key role in managing patients with CVD. Rational use of CV medicine is essential to achieve maximum benefit to healthcare providers as well as users. This study on the pharmaco-epidemiological and economic assessment of drug management in patients with CVD attending government hospitals in Kalutara district was conducted to identify gaps in CV drug management.

This study consists of 4 components. In the Component I pre-tested interviewer administered questionnaire was used in 1745 patients attending the medical clinics of the government hospital in Kalutara district to describe morbidity pattern, prescribing pattern and out of pocket expenses on medicine. Hypertension was the commonest morbidity (81%) among the study participants. Diabetes and hyperlipidemia were associated with 35.4% and 36% of study participants respectively. About 48% of patients with hypertension were on single antihypertensive medication. The prescribing rate of diuretics was lower than that of ACEI. About 10% of patients with hyperlipidemia were not on statin therapy. Only 33% of patients with diabetes were on statin therapy. More than 95% of medicine requirement was covered by 13 essential

medicines. The prescribing rate of Clopidogrel was unacceptably high with 24.2% and 19.9% in referral and primary level hospitals respectively. Mean daily cost of medicines for patients with hypertension, Ischemic heart diseases, strokes and myocardial infarction were Rs. 1.65(SD 0.9), 4.66 (SD 1.1), 4.78 and (SD 1.3) and 7.27 (SD 2.1) respectively.

In the Component II, the availability of CV medicines was assessed in 10 government hospitals for one year. This was the first study conducted in Sri Lanka to assess the availability of medicines longitudinally. Supply of medicines in study hospitals was irregular. Estimates of CV medicines were not in line with the requirement. Availability of Atorvastatin, Aspirin and Clopidogrel were less than 50% while Nifedipine, GTN, Isosorbide dinitrates are among medicines with excess stocks (Availability > 90%). Differences were reported between hospitals within the districts which could be avoided by redistribution of CV medicines.

Component III of the study was a retail pharmacy based cross sectional study describing the cost variation due to substitution of CV medicines. Research Assistants simulated as patients were recruited to purchase 10 selected CV medicines from 30 retail pharmacies in the Kalutara district. Nifedipine represented the highest price inflation (285%) followed by Aspirin (135%) and Atenolol 93.4% with brand substitution.

In the Component IV of the study, essential CV medicine list to manage patients with CVD attending the MC of government hospitals in Kalutara district was developed and validated with the assistance of an expert group. The scientific process of Component IV could be adopted for the other disease categories. The methodology adopted in this component gives policy direction to the Ministry of Health to develop and validate drug inventories for other diseases, as none of the disease categories in Sri Lanka have developed and validated a medicine inventory in a scientific manner.