Abstract

**Background:** Socioeconomic environment influences occupation, lifestyle, and nutrition of social classes which in turn would influence the prevalence and profile of ACS. In India, there are wide social and economic disparities. Free healthcare facilities are available for the economically backward classes, but due to low level of education and occupational problems, these facilities are not always utilised optimally.

There are a number of studies on the cost treatment in patients with ACS from the developed countries very few from the developing countries. All expenditure incurred for the direct cost is met out-of-pocket by the patients. The treatment of ACS is expensive for a very large proportion of patients in developing countries like India.

**Objective:** To carry out the comparative cost effectiveness analysis using economic, clinical and humanistic outcomes for stents used in the treatment of ACS.

**Methodology:** The quality of life studies data was collected from the patients at Kasturba Hospital, Manipal, a tertiary care hospital. The patients were treated with BMS and DES. The instrument to measure health status was EQ-5D-5L involving English and Kannada version. The permission to use the above instrument was obtained by requesting the Euro QoL group and informing them that the instrument is used for research in an academic institution. The ethics committee reviewed the protocol and approved the same for administering the study. Manipal University Ethics Committee approval was taken for the study and Informed consent was obtained from the patient/patient party for enrolment in the study.

The pharmacoeconomic data was computed from data record sheets and data pertaining to socio-demographic information along with cost of treatment and clinical outcomes. The model of the study was prospective, observational, cost effectiveness analysis of BMS and DES used in the treatment of ACS with PCI. Data pertaining to cost and clinical outcomes of the subjects included in the study are derived from case record files of outpatients and inpatients of Cardiology Department of Kasturba Hospital, Manipal.

**Results:** The mean age of patients for BMS was 57.79 ± 9.267 and for DES was 60.65 ±10.103. The gender wise distribution Male /Female in BMS was 79.3% / 20.7% and in DES was 80.4%/19.6%; The Domicile distribution for Rural/ Urban in BMS 72.4%/27.6% and DES 70.1%/29.6%;

Repeated measures ANOVA of utility scores and VAS scores showed significant variation in both groups over a period of one year follow-up. Chi-square test showed no significant
difference in the myocardial infarction, stent thrombosis and death among both the groups of patients.

Incremental cost effectiveness ratio for one unit of QALY was INR 222954, for one VAS score was INR 7688 and for one life saved was INR 52979.

Conclusion: The humanistic outcomes has brought about the issues and challenges faced by patients and it also attempts to communicate different stakeholders’, about opportunities to improve the quality of life of the patients. Economic outcomes have clearly given an insight into the itemised costs of various inputs which can be shared by the patients, hospitals and also the third party reimburses and government.

Overall application of finding of the thesis will rationalise the treatment and will offers an opportunity to decide upon which type of stents can be chosen for a patient depending socio-economic and resources availability.