INTRODUCTION

Different estimates of incidence of drug costs in cardiovascular surgeries and related treatments emerge depending on whether indirect costs are included or not. Leah (1) estimated that drugs absorb 22% of direct and indirect costs of cardiovascular diseases in Europe. Russell (2) states that drugs represent 4-5% of direct costs of heart diseases in United States. This paper analyzes the relative importance of drugs in total direct cost of twenty cardiovascular surgeries performed between 2006 - 2007 at the Penna Hospital (Bahía Blanca) and correlates these costs with other patient-specific variables.

METHODS

Drug spending were regressed in terms of days of hospitalization (total and by type of care unit). Also analysis of variance was applied in order to identify significant differences in drug requirements by groups of patients according to age, sex, pathology and previous diseases. Statistical tests were performed in SPSS 15.0.

RESULTS

Drugs absorbs 4.2% of total direct costs of cardiosurgeries. Dipyrone (1g), morphine (4mg) and cepazolin (1g) represent 58% of total medication spending. Inpatient days account for 69% of the variability in drug expenditures of cardiovascular surgeries. The goodness of fit improves substantially (up to 78%) if inpatient days are disaggregated into common, intermediate and intensive care. The observed large variability in drug spending among patients is related with their biological characteristics, health status and also with sample size. ANOVA tests indicate that male patients require more inpatient days (p < 0.058) and respiratory drugs (p < 0.091) than women. Patients over 50 years old demanded more hospitalization days (p < 0.019) and cefazolin (p < 0.073). The younger group required, in turn, more antibiotics (p < 0.041). Interventions on ischemic heart disease and myocardial revascularization required more inpatient days (p < 0.012), consumed more cardiac drugs (p < 0.03) and heparin (p < 0.099) than other cardiosurgeries. The existence of previous pathologies does not affect inpatient days, affecting only spending amount in anxiolytics (p< 0.088).

CONCLUSIONS

Although this work is not enough to generalize results, it represents a breakthrough in cost estimates of cardiovascular diseases in Argentina. These results are useful for the design of economic evaluations (cost-utility and cost-effectiveness studies) that promote the efficiency in public resource allocations. Furthermore, the incidence of sex, age and type of cardiosurgery performed on hospital care and drug spending offers tools to improve budgetary planning mechanisms in hospitals.

REFERENCES


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4 Also other determinants than inpatient days of drug consumption are recognized, insufficient degrees of freedom hinder the inclusion of more controls in econometric regressions.