

## **Effectiveness of palliative care services: A population-based study of end-of-life care for cancer patients**

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### **Abstract**

#### **BACKGROUND**

Multiple studies demonstrate substantial utilization of acute hospital care and, potentially excessive, intensive medical and surgical treatments at the end-of-life.

#### **AIM**

To evaluate the relationship between the use of home and facility-based hospice palliative care for patients dying with cancer and service utilization at the end of life.

#### **DESIGN**

Retrospective, population-level study using administrative databases. The effect of palliative care was analyzed between coarsened exact matched cohorts and evaluated through a conditional logistic regression model.

#### **SETTING/PARTICIPANTS**

The study was conducted on the cohort of 34,357 patients, resident in Emilia-Romagna Region, Italy, admitted to hospital with a diagnosis of metastatic or poor-prognosis cancer during the 6 months before death between January 2013 and December 2015.

#### **RESULTS**

Patients who received palliative care experienced significantly lower rates of all indicators of aggressive care such as hospital admission (odds ratio (OR) = 0.05, 95% confidence interval (CI): 0.04-0.06), emergency department visits (OR = 0.23, 95% CI: 0.21-0.25), intensive care unit stays (OR = 0.29, 95% CI: 0.26-0.32), major operating room procedures (OR = 0.22, 95% CI: 0.21-0.24), and lower in-hospital death (OR = 0.11, 95% CI: 0.10-0.11). This cohort had significantly higher rates of opiate prescriptions (OR = 1.27, 95% CI: 1.21-1.33) ( $p < 0.01$  for all comparisons).

#### **CONCLUSION**

Use of palliative care at the end of life for cancer patients is associated with a reduction of the use of high-cost, intensive services. Future research is necessary to evaluate the impact of increasing use of palliative care services on other health outcomes. Administrative databases linked at the patient level are a useful data source for assessment of care at the end of life.

#### **KEYWORDS**

Italy; Palliative care; advanced cancer; health resources; humans; quality of health care; retrospective studies; terminal care

## **Triple valve surgery: results from a multicenter experience**

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### **AIMS**

Triple valve surgery (TVS) may still be considered a challenge in cardiac surgery, and is still associated with a not negligible mortality and morbidity. This study analyzed retrospectively patients' data from RERIC (Registro Regionale degli Interventi Cardiochirurgici) registry, to evaluate early and mid-term results of TVS.

### **METHODS**

From April 2002 to December 2013, data from n=44211 cardiac surgical procedures were collected from six Cardiac Surgery Departments (RERIC). Two hundred and eighty patients undergoing TVS were identified, including aortic and mitral replacement with tricuspid repair in 211 patients (75.3%), aortic replacement with mitral and tricuspid repair in 64 (22.9%) and triple valve replacement in 5 (1.8%). Univariate and multivariate analyses were performed to identify predictors of overall mortality or adverse outcomes.

### **RESULTS**

The mean age of the patients was  $67.5 \pm 12.2$ . Overall in-hospital mortality rate was 7.9%: in-hospital mortality was 10.9% in mitral valve repair and 6.6% in mitral valve replacement, respectively. Tricuspid valve replacement was associated with the highest mortality rate (40%). Independent predictors of in-hospital mortality were serum creatinine greater than 2mg/dl [odds ratio (OR) 4.5;  $P=0.03$ ], concomitant coronary artery bypass graft (CABG) (OR 3.8;  $P=0.01$ ) and previous cardiac surgery (OR 5.1;  $P=0.04$ ). Overall cumulative mortality rate at 1, 3 and 5 years was 14.7, 24.1 and 28.9%, respectively. Mitral valve replacement associated with tricuspid valve repair showed better survival rate (hazard ratio 0.1;  $P=0.007$ ).

### **CONCLUSION**

TVS has demonstrated satisfactory results in terms of in-hospital and mid-term mortality rate. Renal failure, reoperations and concomitant CABG resulted as risk factors for mortality; moreover, we could not demonstrate a mid-term better survival rate of mitral valve repair compared with the replacement.