

[The cost of innovation in treating aortic stenosis: transcatheter aortic valve implantation]

[Article in Italian]

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Source

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Abstract

BACKGROUND:

Transcatheter aortic valve implantation (TAVI) represents a promising therapeutic option for patients affected by severe aortic stenosis, but it is currently associated with high costs. Therefore, the assessment of its economic impact becomes urgent to support decision-makers' choices about its use, patient access to treatment and reimbursement mechanisms.

METHODS:

A retrospective, observational, single-center (the teaching hospital located in Bologna, Italy) study was conducted. All patients with severe symptomatic aortic stenosis undergoing TAVI during the enrolment period (February 2008-August 2010) were included. The procedures were performed with both bioprostheses approved for clinical use and through different vascular access: CoreValve transfemoral (CV-TF), CoreValve transsubclavian (CV-TS), Edwards Sapien transapical (ES-TA), Edwards Sapien transfemoral (ES-TF). Costs of the whole index hospitalization have been calculated from the hospital perspective. Healthcare resource consumption was measured at patient level and assessed using unit costs (micro-costing approach).

RESULTS:

Overall, 87 consecutive patients (48 CV-TF, 12 CV-TS, 20 ES-TA, 7 ES-TF) were included in the study. They presented a high-risk profile (age 83.3 ± 5.4 years; logistic EuroSCORE $23.3 \pm 12.3\%$) and important comorbidity. In-hospital mortality was 3.4%. Total cost of hospitalization was, on average, €35.841 (range €27.267-69.744) of which 68% was attributable to the procedure. A huge variation in costs was observed among different treatment groups. Patients treated with transfemoral implant (CV-TF: €33.977; ES-TF: €31.442) were on average less expensive than others (CV-TS: €37.035; ES-TA: €41.139).

CONCLUSIONS:

Our findings show that treating patients with TAVI places a heavy burden on hospital budget. Hence, due to the shortage of financial resources, affordability of TAVI requires further attention.