

overload in the RV. Surgical intervention of TR is associated with mortality rates of 10 percent. Transcatheter therapy interventions (TTI) can be an alternative for severe TR. The aim of this study is to assess effectiveness and safety of TTI.

Methods. A systematic review was carried out. The scientific literature search was performed in major medical databases. Studies analyzing the efficacy and safety of the devices were included. Outcomes related with mortality rates, TR volume reduction, echocardiographic findings and adverse events were analyzed. The methodological quality of the studies was analyzed with the Canadian Institute of Health Economics Quality Appraisal Checklist.

Results. Nine studies comprising 557 patients were included (two first-in-human studies, one retrospective, five single arm prospective studies and one international registry). The studies were small with short follow up. The outcome of procedural success ranged from 80 to 100 percent. Mortality rates at 30 days were lower than 5 percent. Improvements in reduction of TR, European System for Cardiac Operative Risk Evaluation (EuroSCORE), heart failure symptoms or quality of life scores were observed in all studies.

Conclusions. TTI for moderate-severe TR show significant reduction of annulus dimension, improvements in heart failure symptoms and quality of life, which are maintained in mid-term follow up. TTI present lower rates of major serious adverse events. No differences were observed between different TTI devices in terms of procedural success, mortality or safety. Randomized studies comparing TTI with optimal medical therapy are needed to confirm the preliminary clinical impact in patients with severe TR, and define aspects such as patient selection, risk factors associated with procedural success or mortality rates.

PP445 Mapping The Trend Of The Da Vinci Surgical System Use In China

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Introduction. A robotically assisted surgical system, the da Vinci surgical system (DVSS), is a sophisticated surgical platform equipped with immersive 3D visualization and dexterous articulating endoscopic instruments. Surgeons can intuitively control the surgical system to perform delicate surgical tasks. Robotic surgery has gained popularity globally ever since its birth and was approved to market by the China Food and Drug Administration in 2006. This study aims to map the current use of DVSSs in mainland China and the trends from 2009 to 2019.

Methods. A full-sample survey of all hospitals equipped with DVSSs was conducted in mainland China, collecting data on hospitals and surgical departments using DVSSs, operation volume, and time of installation. Disease classification was standardized to obtain DVSS use in each department. EXCEL software was used for logging and cleaning the data. The analysis focused on descriptive analysis to map trends of DVSS use in China and present geographical and department distribution.

Results. The DVSSs installed have grown from seven in 2009 to 135 in 2019. By the end of 2019, twenty-eight provinces in

China have been equipped with the DVSSs, among which eighty-seven in the eastern regions, twenty-seven in the central regions, and twenty-one in the western regions. The annual volume of operations grew from 339 in 2009 to 38,991 in 2019, at an annual rate of 60.7 percent. The average workload conducted by a single robot is much higher than that of their counterparts in other countries. The largest share of the volume is in department of urology (48%), followed by general surgery (25%) and thoracic surgery (13%).

Conclusions. The use of DVSSs in China has been growing rapidly and extensively, with certain differences between geographical regions and surgical departments. We need to further explore the factors affecting its use and operation efficiency and to evaluate the effectiveness as well as cost-effectiveness in real-world clinical practice to inform public policies on application of DVSS, for example, license and insurance.

PP455 Cost-effectiveness Of Ixazomib-Based Regimen Compared With Bortezomib-Based Regimen In Chinese Patients With Relapsed/Refractory Multiple Myeloma: A Retrospective Study

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Introduction. The treatment of relapsed/refractory multiple myeloma (RRMM), a common hematological malignancy, remains a great challenge in China, partially due to the limited accessibility to novel agents and inadequate public health insurance coverage. Ixazomib, a novel oral proteasome inhibitor (PI), was approved by the China Food and Drug Administration (CFDA) for RRMM in 2018. While bortezomib, a traditional PI, is the recommended agent in the clinical guideline for MM. Here, we compared their costs and effectiveness.

Methods. RRMM patients who has received an ixazomib-based regimen (at least 2 cycles) were analyzed. Using a propensity score matching method, we generated a control group of RRMM patients who received the bortezomib-based regimen. The criteria included the number of treatment lines, age, and the revised international staging system stage (R-ISS) which representing the disease stage for myeloma, and paired at a ratio of 1:2 (allowing one control to match multiples). The difference in hospitalization stay, grade 3/4 adverse events rates, overall response rate (ORR), mortality during treatment, and treatment costs was then compared.

Results. Nineteen patients received ixazomib and twenty-seven that received bortezomib were included. The ixazomib-group demonstrated a shorter hospital stay (9 days versus 27 days, $p < 0.001$), lower grade 3–4 adverse events rates (42.1% versus 55.6%, $p < 0.001$), higher ORR (63.2% versus 48.1%, $p = 0.228$), and lower mortality rate during treatment (0% versus 7.4%, $p = 0.169$) than that of bortezomib-group. The ixazomib group had lower total costs (127,620CNY versus 156,424CNY [18,033USD versus 22,103USD], $p > 0.05$), lower drug costs (98,376CNY versus 103,307CNY [13,901USD versus 14,598USD], $p > 0.05$), and the lower costs of supportive treatment (5,507CNY versus