do as well. Limited mobility is red flag, and patients who exhibit it should be considered a greater-risk population.

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Commentary: Recalibrating the eyeball test

Jason P. Glotzbach, MD, and Craig H. Selzman, MD

Although surgeons have been in the tricky business of risk assessment since Halstead, perhaps never in surgical history has preoperative patient selection and counseling been more central to decision-making than in the age of catheter-based structural heart interventions. In this issue of the *Journal*,¹ van der Wulp and colleagues offer another contribution to this evolving clinical paradigm. In a prospectively gathered cohort of 511 elderly patients with aortic stenosis, formalized geriatric assessment provided granular preoperative data on patient characteristics including cognitive,

Jason P. Glotzbach assessing Craig H. Selzman's frailty.

CENTRAL MESSAGE

Quantitative assessment of preoperative frailty is critical for patients undergoing transcatheter valve procedures to identify patients at high risk for postoperative delirium and poor outcomes.

functional, and nutritional status before transcatheter aortic valve replacement (TAVR). They found that impaired preoperative mobility predicted a greater risk of postoperative delirium and decreased 2-year survival from 91.4% to

From the Division of Cardiothoracic Surgery, University of Utah, Salt Lake City, Utah.

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Address for reprints: Jason P. Glotzbach, MD, Division of Cardiothoracic Surgery, University of Utah, 30 North 1900 East, SOM 3C-127, Salt Lake City, UT 84132 (E-mail: jason.glotzbach@hsc.utah.edu).

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79.4%, thus confirming what we all intuitively suspect to be true—patients in worse physical shape before surgery tend to have worse outcomes.

There are several problems with this study that limit the generalizability to the broader TAVR patient population; all of the cases were performed with general anesthesia and most via transaxillary access (71.4%), which is not the predominant practice pattern at most high-volume centers. As the authors acknowledge, it is certainly possible that patients undergoing transfemoral access using conscious sedation would have had different contributors to postoperative delirium.

While this study does not provide a genuine “a-ha” moment, it does underscore the need for surgeons to remain involved in the risk assessment and patient-selection process. The original trial design for TAVR rightly included a mandatory heart team concept that started with patient risk assessment.² Now that conclusive evidence of the early safety and effectiveness of TAVR has been established, it is crucial for all members of the heart team to continue diligent work to refine the perioperative risk-assessment process. At our institution, we routinely involve the geriatrics and palliative care service in the preoperative discussions with patients in the valve clinic and test mobility with the 5-meter walk test.

The risk assessment process should be standardized using objective reproducible metrics. Although clinician experience and subjective evaluation certainly play a role, the accuracy of even experienced clinicians to predict outcomes lags more refined tools. For example, Jain and colleagues³ demonstrated that surgeons overestimate risk in low risk patients but underestimate risk in high-risk patients. Frailty is

known to predict poor outcomes following TAVR.⁴ The Valve Academic Research Consortium-2 consensus document highlights the need for formal frailty testing in addition to the STS preoperative risk score, but there is not an agreed-on objective metric for mobility.⁵ The “timed up and go” test, which van der Wulp and colleagues used in this study, is a validated metric to quantify functional mobility in elderly patients.⁶ Quantitative metrics such as these are indispensable in building reliable clinical protocols and pathways. Although we surgeons should never discount the importance of our own eyeballs, perioperative risk should be assessed using a quantitative multidisciplinary approach that will facilitate optimal outcomes for these challenging patients.

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