

# Splenic angioembolization: still an important tool in the toolbox

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Since the first description in 1981, splenic artery embolization (SAE) has become an important tool in the management of splenic trauma and is now used in 20% of patients with grade IV–V injuries.<sup>1</sup> However, SAE may also be overused with variations in how frequently it is used across trauma centers. In this article, Ahmad *et al* compared the outcomes after high-grade (III–V) splenic injury in their centers to national outcomes using the 2018 National Trauma Data Bank.<sup>2</sup> Their local cohort had comparable rates of surgery (28% vs. 26%), yet lower rates of SAE (6% vs. 18%) with both lower rates of additional interventions and lower risk-adjusted mortality.

It is important to point out that the American Association for the Surgery of Trauma (AAST) grading system was updated in 2018.<sup>3</sup> Any injury with a contrast blush is now at least a grade IV injury whereas similar injuries may have been graded lower previously. This makes applications of results of prior studies and studies that use older databases (including the present study) to current clinical care more challenging.

A systematic review concluded that SAE reduces the risk of failure of non-operative management for grade IV and V injuries but has minimal effect on grade I–III.<sup>4</sup> A multicenter trial published in 2020 randomized 133 patients at high risk of spleen rupture (grade III–V) to either prophylactic embolization or surveillance.<sup>5</sup> Although the rates of splenic salvage were equivalent (98.2% vs. 93.3%) at 1 month, one-third of the patients in the surveillance group ultimately required an intervention. Even though the trial did not recommend a specific management strategy, the high overall need (71% for patients with grade IV or higher) for intervention highlights the need to consider SAE especially in patients who may not be followed closely or in centers without 24/7 ability for intervention.

Several societies have also published guidelines on the role of angiography. Eastern Association for Surgery of Trauma (2012) recommended that angiography should be considered for hemodynamically stable patients with greater than grade III injuries or in the presence of a contrast blush.<sup>6</sup> The World Society of Emergency Surgery (2017) recommended angiography for AAST IV–V injuries and Western Trauma Association (2022) also recommend angiography in the presence of a blush.<sup>7,8</sup> The Society of Interventional Radiology (2020) also has a position statement which similarly recommends angiography in patients with

clinical or imaging evidence of hemorrhage with any grade splenic injury.<sup>9</sup>

The finding of the present study adds to the current body of literature that suggests that SAE may not be necessary in all patients with high-grade injuries. Even though it has several acknowledged limitations, it highlights the need for appropriate patient selection for SAE as well as that there may be not only by patient but also center-specific factors that should guide the decision.

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