was also independently associated with increased bowel resection length (OR, 7.47; $P < .01$) and postoperative short bowel syndrome (OR, 2.4; $P = .03$) on multivariate analyses. When examined separately on subgroup analysis, both delayed vascular consultation (OR, 3.38; $P = .03$) and vascular surgery (OR, 4.31; $P < .01$) independently increased risk of 30-day mortality. Hospital discharge after AMI without mesenteric revascularization was associated with increased risk of short bowel syndrome (OR, 2.94; $P < .01$) and late mortality (hazard ratio, 1.60; $P = .04$).

Conclusions Delayed vascular consultation and vascular surgery are both significant hospital-based determinants of postoperative mortality and short bowel syndrome in patients with AMI. Timing-based management protocols that emphasize routine evaluation by a vascular surgeon and early, definitive mesenteric revascularization should be established and widely adopted for all patients with clinically suspected AMI at presentation.

Assessment of open surgical and endovascular management of true hepatic artery aneurysms over 20 years highlights increased rupture risk in females

Jamie C. Stark, HBSc [a], Naomi Eisenberg, PT, MEd, CCRP [b], Sebastian Mafeld, MBBS [c], Ian McGilvray, MD, PhD [d], Graham Roche-Nagle, MD, MEd, MBA [b,d], Kathryn L. Howe, MD, PhD [b,d]

[a] *Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada*
[b] *Division of Vascular Surgery, Peter Munk Cardiac Centre, Toronto, Ontario, Canada*
[c] *Joint Department of Medical Imaging, University Health Network, Toronto, Ontario, Canada*
[d] *Sprott Department of Surgery, Toronto General Hospital, University Health Network, Toronto, Ontario, Canada*

Background True hepatic artery aneurysms (HAAs) are rare but have been associated with a significant risk of rupture and associated mortality. The 2020 release of HAA-specific clinical practice guidelines represented an important step toward management standardization. However, it remains essential to build on the body of evidence to further refine these recommendations.

Methods The HAA management and outcomes from a single academic center during a 20-year period were retrospectively reviewed. We identified 72 patients from the institutional radiology database (November 24, 1999 to 2019). Pseudoaneurysms were excluded, and 48 patients were found to have had true HAAs. Forty-three HAA patients had sufficient medical records for inclusion in the analysis.

Results Of the 43 patients with HAA included, 65% were male. The mean age was 63 years (range, 22-89 years). Of the HAAs, 72% presented asymptomatically, 16% had ruptured, and 12% were symptomatic at presentation. Most HAAs were of atherosclerotic origin (74%). In addition, 16% of the patients had other visceral aneurysms and 12% had nonvisceral aneurysms on presentation. The mean HAA size overall was 3.3 cm (range, 0.8-10.8 cm), with most being solitary (72%) and involving the common hepatic artery (65%). Rupture was more common in females (40%) and those with vasculitis (67%), with females representing 86% of all patients with rupture. The mean size at intervention was 4.8 cm (21 patients [49%]). Ten patients (23%) had undergone open surgical repair (seven elective and three emergent because of rupture). Eleven patients (26%) had undergone endovascular intervention (64% elective and 36% emergent). Nonoperative management was selected for 22 patients (51%). These patients had a mean HAA diameter of 2.1 cm, and 59% had a life-limiting illness. Of the 18 patients who had been initially monitored for a mean of 3.9 ± 4.1 years, 3 had undergone elective repair and 2 had minimal growth. None of these patients had a subsequently documented rupture.

Conclusions True HAAs are a rare but important clinical phenomenon, with 16% of patients presenting with rupture in this study. Endovascular intervention is a promising alternative to open surgical repair, with no 30-day mortality, and is suitable for ruptured HAAs. Importantly, for the first time, our findings have demonstrated an increased risk of rupture for females, highlighting the need for additional data and ultimately, sex-specific guidelines.

A meta-analysis of randomized controlled trials on therapeutic efficacy and safety of autologous cell therapy for atherosclerosis obliterans

Hongji Pu, MD [a], Qun Huang, MD [a], Xing Zhang, MD [a], Zhaoyu Wu, MD [a], Peng Qiu, MD [a], Yihong Jiang, MD [a], Ruihan Wang, MD [b], Zhen Zhao, MD [a], Zhijue Xu, MD, PhD [a], Jinbao Qin, MD, PhD [a], Xinwu Lu, MD, PhD [a,c], Weimin Li, MD [a]

[a] *Department of Vascular Surgery, Shanghai Ninth People's Hospital, Shanghai JiaoTong University School of Medicine, Shanghai, China*
[b] *Department of Vascular Surgery, Zhongshan Hospital, Fudan University, Shanghai, China*
[c] *Vascular Center of Shanghai JiaoTong University, Shanghai, China*

Objective Atherosclerosis obliterans (ASO) is a chronic occlusive arterial disease and the most common type of peripheral arterial disease. Current treatment options like medication and vascularization have limited effects for "no-option" patients, and stem cell therapy is considered a viable option, although its application and efficacy have not been standardized. The objective of this review was to assess the safety and efficacy of autologous stem cell therapy in patients with ASO.

Methods We performed a literature search of published randomized controlled trials (RCTs) for patients with ASO receiving stem cell therapy without a revascularization option. PubMed, Embase, and the Cochrane Library were searched. This study was conducted by a pair of authors independently and audited by a third author. Data were synthesized with a random-effects model.

Results A total of 630 patients in 12 RCTs were included. The results showed that cell therapy significantly improved total amputation (relative risk [RR], 0.64; 95% confidence interval [CI], 0.47-0.87; $P = .004$), major amputation (RR, 0.69; 95% CI, 0.50-0.94; $P = .02$), ankle-brachial index (mean difference [MD], 0.08; 95% CI, 0.02-0.13; $P = .004$), transcutaneous oxygen tension (MD, 11.52; 95% CI, 3.60-19.43; $P = .004$), and rest pain score (MD, −0.64; 95% CI, −1.10 to −0.17; $P = .007$) compared with placebo or standard care. However, current studies showed cell therapy was not superior to placebo or standard care in all-cause death (RR, 0.75; 95% CI, 0.41-1.36; $P = .34$) and ulcer size (MD, −8.85; 95% CI, −29.05 to 11.36; $P = .39$). The number of trials included was limited. Moreover, most trials were designed for "no-option" patients, and thus the results should be applied with caution to other patients with peripheral arterial disease.

Conclusion Patients with ASO can benefit from autologous cell therapy in limb salvage, limb blood perfusion, and rest pain alleviation.