Within a congenital arteriovenous malformation.

Fig. Pretreatment angiogram of traumatic pseudoaneurysm came off of the pseudoaneurysm. In addition, before the trauma embolization of the arteriovenous malformation before endograft placement with significant decrease in the size of the pseudoaneurysm and a stable arteriovenous malformation.

I appreciate bringing this issue to our and the attention of the readers. It is an important consideration in the management of these very complex lesions.

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Regarding “Peripheral arterial interventions: Trends in market share and outcomes by specialty, 1998-2005”

The article by Eslami et al describes not only the shift of market share of endovascular procedures over time from Interventional radiology (IR) to vascular surgery (VS) and Interventional cardiology (IC) but also purports to show a significant difference in hospital mortality and iatrogenic vascular injuries. There are some systemic weaknesses in the data and analysis.

First, as the authors acknowledge, the data sampled is limited to inpatients—a tiny minority of peripheral arterial disease patients. The accompanying commentary by Satani describes this as only 3% of interventional procedures actually performed in this country, an estimate confirmed by Levin et al. Outpatients are more likely to be healthier and have a lower complication rate. If one specialty were more likely than another to perform outpatient procedures, this would skew the data for both market share and complication rate. Including outpatient data for the year 2002, Levin et al. reported the market shares for IR, VS, and IC were, respectively, 42%, 10%, and 36%. For the same year, Eslami et al report market shares for IR, VS, and IC of 25%, 25%, and 27%. This supports the contention that analyzing only inpatients underestimates IR market share and likely overestimates IR complications.

Second, patients with lower extremity arteriography were included for analysis. Diagnostic arteriography is less likely to lead to a complication than a procedure that includes both the diagnostic arteriogram and intervention. If one specialty is more likely than another to perform a revascularization procedure as a separate procedure from the diagnostic arteriogram, that specialty will be recorded as having more total procedures and a lower overall complication rate. Eslami et al state that for IC, only 3% of interventions are performed at the same time as the diagnostic arteriogram. In my experience for IR, >90% of interventions are performed at the same time, and my hospital uses the 90% benchmark as a quality threshold for all specialties. This large difference suggests that the analysis underestimates IR market share and overestimates IR complications.

Third, it is possible there was systemic under-reporting of iatrogenic arterial injuries by vascular surgeons. For example, a coder may not note a complication if a surgeon converted a percutaneous to an open femoral access due to problems with the access.

Fourth, identification of physician specialty is not accurate. IR physicians are identified as providers who not only perform peripheral arterial interventions but also either transjugular intrahepatic portosystemic shunt or nephrostomy, but not aortic stent grafting (endovascular aneurysm repair [EVAR]). An IR physician who performed EVAR would be labeled as “other” because EVAR is considered a procedure limited to VS physicians. It is likely that the most skilled IR physicians with the highest volume of peripheral arterial procedures are the ones who perform EVAR. In 2002, EVAR case volumes by specialty were IR (4853), VS (10,859), and IC (1950). Not including IR physicians who perform EVAR will underestimate the IR market share and likely overestimate complications.

Fifth, IR treated sicker patients, as demonstrated by a much higher rate of emergent and urgent procedures compared with VS...