Regarding “Feasibility of endovascular repair of abdominal aortic aneurysms with local anesthesia with intravenous sedation”

To the Editors:

We read with interest the article by Henretta et al (J Vasc Surg 1999;29:793-8). We too acknowledge the safety of local anesthesia (LA) and the advantages it provides over regional or general anesthesia. In our practice, insertion of aortic endoprosthesis with LA has progressively been extended to the most difficult and risky cases with good results as reported here.

In the last 20 months, we have treated 100 patients (mean age, 71 ± 8 years) with abdominal aortic aneurysms (AAAs) with endoprosthesis. Ninety-one patients had significant comorbidities as highlighted by the mean American Society of Anesthesiologists class of 3.5 ± 5. Ninety-six patients underwent treatment with bifurcated grafts and four with tube grafts. Conversion to open aortic repair was not necessary. Eighty-seven patients had asymptomatic AAAs, eight had symptomatic AAAs, and five had ruptured AAAs (with retroperitoneal bleeding). In the latter patients, hemodynamics could be stabilized before surgery with fluid and blood infusion. Anesthetic management included LA in 74 patients, regional anesthesia in seven patients, and general anesthesia in 19 patients (used preferably when the prosthesis had to be inserted through the iliac artery). LA was used in all the patients with ruptured AAAs and in seven patients with symptomatic AAAs. There was no operative or postoperative mortality. Thirty-seven patients with severe comorbidities and symptomatic or ruptured AAAs were admitted to the intensive care unit for 0.5 ± 1 day. Hospital stay was shorter than after open repair (6 ± 5 days vs 11.9 ± 3.5 days). There were no cerebral or cardiac events and no respiratory complications. Only one reoperation on the access vessel was necessary because of an intimal flap at the arteriotomy site. The patients were all regularly controlled with computed tomography. During the follow-up period (mean, 10 ± 6 months), no one showed evidence of aneurysm growth or sign of rupture. Seven patients returned for a short hospitalization to close a residual leak between the endoprosthesis and the aneurysm or for treatment of a local mechanical complication (stenosis, n = 2; thrombosis, n = 3). These corrections could always be performed with endovascular technique.

The use of LA maintained an extraordinarily stable state regarding fluid balance and requirement for inotropic support. With a similar duration of the procedure (137 ± 86 minutes; median, 115 minutes), fluid intake was much less for LA (1230 ± 990 mL; median, 1050 mL) than for regional anesthesia (1580 ± 700 mL; median, 1420 mL; P < .05) or general anesthesia (2200 ± 1300 mL; median, 1900 mL; P < .05). Likewise, inotropic support was less frequently necessary in patients who were managed with LA (12 of 74 patients; 16.2%) than with regional anesthesia (5 of 7 patients; 71.4%; P < .05) or general anesthesia (12 of 19 patients; 63.1%; P < .001).

Conclusively, these two series confirm the safety of LA. This also holds true for symptomatic or ruptured cases, if the hematoma is contained in retroperitoneum. This minimal anesthetic approach appears to be most appropriate to the hypovolemic, hypotensive patient because it avoids acute changes in hemodynamics as the result of induction of general anesthesia and the acute loss of blood on opening the retroperitoneum, which often triggers a dangerous and difficult-to-control state of shock.

Mario Louis Lachat, MD
Clinic for Cardiovascular Surgery
University Hospital Zurich
Zurich, Switzerland

REFERENCE


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