26210 - ANAESTHETIC MANAGEMENT OF AAA REPAIR : ENDOVASCULAR VS. STENT

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INTRODUCTION: We undertook an audit of all patients whom electively underwent either endovascular aortic repair (EAR) or open aortic repair (OAR) of their infrarenal abdominal aortic aneurysms(AAA) at our institution in 2004. This audit was intended to provide an overview of the anaesthetic management of AAA repair at our institution, as we believe the management was different from that previously reported (1).

METHODS: All data for this study was collected retrospectively. Ethics approval was obtained from the local IRB. Informed consent was not required due to the data collection nature of the study. Data from 89 patients undergoing EAR was compared to 99 patients undergoing OAR. Statistical methods included Student t-test and chi-square analysis, and a p-value less than 0.05 was considered significant.

RESULTS: In comparison to the open repair group the endovascular repair group showed statistically significant increases in age, ASA status, previous myocardial infarction, ischemic heart disease, and CVA/TIA history (data to be presented). Other demographic data was not different. Table 1 demonstrates comparisons of intraoperative results. The OAR group also had a larger number of significant postoperative complications including CHF/pulmonary edema (24 vs. 0), hypotension (25 vs. 4), GI problems (11 vs. 1), and pneumonia (10 vs. 2).

DISCUSSION: We noted that general anesthesia is used as the primary anesthetic technique for both open and endovascular repair of AAAs, which differs from the techniques reported in previous studies (2). We confirmed the findings of previous studies(3) that EAR offers significant advantages over OAR in terms of intraoperative estimated blood loss and total operative time, and also has the advantage of fewer postoperative complications. We found that there was significantly greater cell saver and pulmonary artery catheter use in the OAR group, and also significant differences in intraoperative narcotic use between the two groups. Additionally, we found that in the OAR group there was significantly greater use of epidural anesthesia for intraoperative and postoperative analgesia.

REFERENCES:

1. Anesthesia Intensive Care 2002, 30(1) 66-70
2. Anesthesia Intensive Care 2002, 30(1) 66-70
3. Heart Surg Forum. 2004;7(5):E459-61

Table 1 : Intraoperative Results

	OAR (n=99)	EAR (n=89)	P value
O.R. time (minutes)	249 ± 46	214 ± 45	<0.0001
GA / CSE (n)	99 / 0	85 / 4	0.0330
Epidural (n)	89	1	<0.0001
Intra-operative fentanyl use (mcg)	263 ± 128	210 ± 110	0.0028
Intraoperative morphine use (mg)	2.1 ± 3.5	4.6 ± 3.5	<0.0001
Intraoperative ephedrine use (mg)	2.9 ± 6.5	5.4 ± 9.0	0.0253
Intraoperative phenylephrine use (mcg)	125 ± 271	110 ± 201	0.6692
Estimated intraoperative blood loss (mL)	1020 ± 588	295 ± 282	<0.0001
Intraoperative blood transfusion received (n)	29	3	<0.0001
PAC used (n)	64	26	<0.0001
CVP used (n)	99	88	0.2903

values are mean ± SD