26200 - PERIPARTUM ANESTHETIC MANAGEMENT OF PATIENTS WITH AORTIC STENOSIS.

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Introduction: Aortic stenosis (AS) in young women is usually the result of a stenotic bicuspid aortic valve, which is the most common cardiac congenital anomaly (2-3% of the population). Severe AS carries a high risk of fetal and maternal morbidity and mortality and requires special attention. The anesthetic management of the parturient with AS has been discussed in several case reports. We presented our experience in peripartum anesthetic management of patients with moderate and severe AS.

Methods: We reviewed the peripartum records of all parturients with the diagnosis of AS who were treated in Shaare Zedec Medical Center (Jerusalem, Israel) and Mount Sinai (Toronto, Canada) between the years 1990 and 2005. Demographic data, etiology of AS, NYHA functional class, results of cardiac echography, mode of delivery, anesthetic management, peripartum monitoring, fluids and complication were summarized and presented in tabular form. The severity of AS was classified as moderate (valve area 0.8 to 1.2 cm² and peak gradient 35-64 mmHg) and severe (valve area <0.8 cm² and peak gradient >64mmHg).(1)

Results: There were six patients with moderate AS and six with severe AS (table). 5/6 parturients with moderate AS had regional anesthesia for either vaginal delivery or cesarean section. 3/6 parturients with severe AS had regional anesthesia. 4 patients with severe AS and 2 with moderate AS had invasive blood pressure monitoring. One patient with critical symptomatic AS had intraoperative transesophageal echocardiography (TEE) under general anesthesia. There were no anesthetic complications (except one failed epidural) or hemodynamic instability.

Discussion: Traditionally, neuraxial anesthesia has been contraindicated in patients with AS because of the fear that a sudden decrease in systemic vascular resistance may precipitate severe hypotension in the face of fixed cardiac output.(2) The anesthetic management of patient with AS focuses on hemodynamic stability.(3) The use of a slowly titrated epidural or combined spinal-epidural with reduced dose of spinal anesthesia, may provide this stability in all except possibly the most severely affected parturients. The management of some patients with AS may be facilitated by invasive monitoring. Special attention to postoperative analgesia, monitoring and volume status may prevent hemodynamic instability and complications.

1-Silversides CK The American Journal of Cardiology 2003;91;1386-89.

2-Stoelting RK Anesthesia and Coexisting Disease. 2002:38-40.

3-McDonald SB Regional Anesthesia and Pain Med. 2004; 29; 496-502.

	Moderate AS	Severe AS
Number	6	6
Etiology	5 Bicuspid 1 Rheumatic	5 Bicuspid 1 Rheumatic
AVA Area	0.9-1.0 cm ²	0.5-0.8 cm ²
Max gradient	35-62 mmHg	64-130mmHg
NYHA class	I-4; II-2	I-1; II-3; III-2
Monitoring	4-Standard 2- Standard & IBP	2-Standard 3- Standard & IBP 1- Standard, IBP,TEE
Mode of delivery and anesthesia (OD-operative delivery)	2 NVD-epidural 2 OD-CSE and epidural 1 CS-epidural (elective) 1CS -GA after failed epidural (fetal distress)	1 OD- IV sedation 2 OD-epidural 1 CS-epidural 1CS- GA+ intrathecal opioids 1CS- GA (all elective CS)
Peripartum fluids (mL)	CS: 300; 500 OD: 200; 500 NVD: 500; 800	CS: 800; 1000; 1000 OD: 150; 500; 500
Postpartum monitoring	3-ICU (24h) 3-RR (4-6h)	5-ICU (24h) 1-ICU (48h)
Complication	Failed epidural	