44024 - CAROTID ARTERY ANGIOPLASTY AND STENTING:ANESTHETIC IMPLICATIONS

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INTRODUCTION: Patients with carotid artery occlusive disease frequently have other co morbidities, especially cardiac disease. A newer option for treatment is carotid angioplasty and stenting (CAS), which has been shown to result in lower incidence of stroke and myocardial infraction, but may have a high incidence of hemodynamic changes during the procedure. (1,2) We reviewed the anesthetic management and the incidence of cardiovascular and other complications during and after treatment with CAS.

METHODS: After ethics board approval, medical records of all patients who had CAS over an 18-month period were reviewed. Data collected included demographics, preoperative co morbidities, anesthetic management and the incidence of complications during and post CAS.

RESULTS: 29 patients were reviewed; mean age ($\pm$ SD) was 71 ± 11 yr, weight 76 ± 11 kg, 16 male, 13 female and median ASA 3 (range 2-4). 21 patients (72%) presented with TIA, remainder with stroke. Pre-procedure medical co morbidities were: coronary artery disease 31%, hypertension 55%, diabetes 27% and peripheral vascular disease 6%. Anesthesia was conscious sedation in 27 patients (propofol 86 ± 94 mg (n=23), fentanyl $102\pm 85\mu$ g (n=23), midazolam 2.4 ± 1.4 mg (n=25). Two patients had general anesthesia as they also planned treatment of intracranial lesions. Monitoring included ECG, non-invasive blood pressure, PETCO₂, and SpO₂. A defibrillator/pacemaker was present in the room for all patients but not attached to any patient. Prophylactic vagolytic agents were used in 72%, (glycopyrrolate 0.29 ± 0.1 mg (n=20) and atropine 0.6mg (n=1). There were no incidences of myocardial ischemia. One patient developed hyperperfusion syndrome post procedure. Complications are shown in Table.

⊞ Complications and treatment

	Intra-procedure	Post-procedure
Bradycardia	2 (6.9%)(atropine 0.6mg)	0
Hypotension	3 (10%)(phenylephrine, ephedrine)	6 (21%)(fluids)
Hypertension	2 (6.9%)(labetalol)	1 (3.4%)(labetalol)
ECG changes	1 (3.4%)	0
Respiratory	0	0
Neurological	2 (6.9%)	2 (6.9%)
Other	1 (pain)	2 hematuria, 1 neck swelling

N=number of patients

CONCLUSIONS: Conscious sedation was an effective technique of anesthesia allowing for rapid diagnosis and treatment of a neurological problem in 2 patients. The incidence of bradycardia has been shown to be decreased with use of prophylactic vagolytic agents (2) however we found an incidence of 6.9% despite administration of a prophylactic vagolytic agent (atropine in one patient and glycopyrrolate in other). Blood pressure changes were more frequent during (17%) and after (24%) the procedure requiring treatment. This warrants continuous careful monitoring of patients.

REFERENCES: 1. N Engl J Med 2004;351:1493, 2. Am J of Cardiol,1998;82:1077