

44539 - PREDICTIVE FACTORS FOR POSTOPERATIVE HYPERTENSION IN CRANIOTOMIES FOR TUMOR

Raman Diddee, University Health Network, Toronto Western Hospital, Toronto, ON, Canada;

Lashmi Venkatraghavan, University Hospital Network - Toronto Western Hospital;

Hossam El Beheiry, University Hospital Network - Toronto Western Hospital;

Atul Prabhu, University Hospital Network - Toronto Western Hospital;

BACKGROUND AND GOALS: Because systemic hypertension (HTN) is a quoted risk factor for post-craniotomy intracranial hematomas¹, immediate post-operative hypertension following craniotomies can result in hematoma development and the worsening of cerebral edema. Hence, the objective of this prospective cohort study is to identify independent predictors that are associated with the development of immediate postoperative hypertension.

MATERIAL AND METHODS: Following IRB approval, all consented adult patients (age 18-75 years) that underwent craniotomies for tumor were prospectively followed. We collected patient demographics, vital signs, duration of surgery, pathology of the lesion, evidence of raised intracranial pressure plus peri and postoperative complications. Anesthetic management of the patients was at the discretion of the anesthesiologists. Hypertension was defined as a value of greater than 160/90 mmHg lasting for longer than 5 minutes. Incidence, causes and treatment of hypertension in the postoperative period were also recorded. Statistical analysis of non-parametric data was performed using binary logistic regression.

RESULTS: A total of 506 patients had craniotomies between January 2004 and June 2006. 135 (26.7%) patients were hypertensive in the postoperative period. Hypothermia and pain scores greater than 5 were excluded as confounding factors leaving a true incidence of 21.5% (109 patients). Age, sex and evidence of raised intracranial pressure showed a similar distribution in both hypertensive and non-hypertensive groups. The table below demonstrates the results of the logistic regression analysis for the 506 patients.

TABLE 1:

CONCLUSION: In our study the incidence of post craniotomy HTN is 21.5%. Following logistic regression analysis the only independent predictive factor was age showing a significant positive correlation

REFERENCES: 1) Basali A, Mascha EJ, Kalfas I, Schubert A. *Anesthesiology*.2000;93: 48-54.

	p	Odds ratio	95.0% C.I. for odds	
			Lower	Upper
Age	.0001	1.038	1.020	1.057
Sex	.255	1.302	.827	2.050
Meningioma	.293	.534	.166	1.719
Astrocytoma	.091	.275	.062	1.229
GBM	.186	.445	.134	1.476
Metastatic disease	.450	.630	.190	2.066
Oligodendroglioma	.079	.129	.013	1.272
Other	.598	.726	.221	2.383
ASA	.650	.914	.619	1.349
Chronic Hypertension	.660	.867	.522	1.509
Raised Intracranial Pressure	.162	1.471	.856	2.527
Operation Time	.818	1.000	1.000	1.000
Intraoperative Hypotension	.232	1.335	.831	2.145
Intraoperative Hypertension	.215	1.350	.840	2.168