SUBARACHNOID HEMORRHAGE : BRAIN HEART LUNG INTERACTION : ABOUT 43 PATIENTS

A.Naili, H.Triki, S.Bouderra, Intensive care unit -EPH Sidi-Ghiles-Tipaza-ALGERIA

Introduction:

Subarachnoid hemorrhage is a neurovascular emergency mainly affecting the young adult, aneurysm rupture in 2% to 5%, but post traumatic most often. The mortality-dependence associated with this pathology is of the order of 25%, cardiovascular and pulmonary complications have been described in connection with the occurrence of subarachnoid hemorrhage.

Primarily related to activation of the sympathetic system.

The aim of the work is to determine the rate of cardiopulmonary complications that happened in our department on meningeal hemorrhage.

Patients and method :

329 patients admitted in our department in the year 2016 for different pathologies who have subarachnoid hemorrhage
We collected clinical, etiological and therapeutic data of those.

Results & Discussion :

*43 patients out of 329 had cardiomyopathy and / or neurogenic OAP complications
→ 13%
*The diagnosis was made after eliminating the other etiologies.
*The 43 patients had a grade of Hunt and Hess > 2 → positive correlation.

*74% of patients > 50 years old.
*2 patients had a history of diabetes, and terminal CKD.
*positive correlation with age resistance to neurogenic stress, disruption of self-regulation in the elderly.

- **Troubles of rhythm 3 patients (12%) vs. 4%**
- **Troubles of repolarization with systolodiastolic dysfunction**
- **And EF <55% in 9 patients (37%) vs. 30%**
- **Troponin increased in 50% vs 12-50%**

- **18 neurogenic APO J2 (42%) vs 2-6%**
- **4 patients 9% with cardiomyopathy & APO**

RESUSCITATION MEASURES:

- Inotropic catecholamines (+) Dobutamine in 17 patients.
- Optimization of CPAP: haemodynamic optimization (PAM > 100), and fight against ICH osmotherapy + tritherapy in 7 patients, hypothermia at 34 ° c.
- Mechanical ventilation in 5 patients, with limitation of vascular filling and PEP < 15.
- Permissive hypercapnia with monitoring of capnography, ICP and transcranial Doppler monitoring

CONCLUSION :

- Neurogenic cardiopulmonary complications appear to be a classically described but still underestimated and under-diagnosed entity.
- Their incidence is high so knowledge of the pathophysiology of the causal mechanism is essential for good management.

REFERENCES :

- Hémorragie sous arachnoïdienne, G. Audibert, A. Baumann. Conférence le congrès Sfar 2016.
- Physiopathologie des lésions cérébrales précoces et retardées dans l'hémorragie sous-arachnoïdienne : avancées récentes. Réanimation 2012 ; 21 : S475-S481(4) Conférence française d'experts.
- Parekh, N., B. Venkatesh, D. Cross, et al., Cardiac troponin I predicts myocardial dysfunction in aneurysmal subarachnoid hemorrhage. *J Am Coll Cardiol.*, 2000. 36: p. 1328-35.
- Mayer, S.A., J. Lin, S. Homma, et al., Myocardial injury and left ventricular performance after subarachnoid hemorrhage. *Stroke.*, 1999. 30: p. 780-6.
- Tung, P., A. Kopelnik, N. Banki, et al., Predictors of neurocardiogenic injury after subarachnoid hemorrhage. *Stroke.*, 2004. 35: p. 548-51. Epub 2004 Jan 22.