

HS, 46 (38%) had right HS and 13 (11%) had bilateral HS. TPA was not present in any of controls. Ninety (75%) of 120 patients had associated TPA. TPA was always ipsilateral to unilateral HS and usually (70%) ipsilateral to the more affected hippocampus in bilateral cases. The HS side made difference regarding the presence of TPA, with a left side preference. The anteromedial zone of TP was affected in 27 (30%) out of 90 patients. In 63 (70%) patients the lateral zone were also affected. The presence of TPA was significantly associated with a younger age at onset of habitual seizures, but not with history of febrile seizure (FS) or other initial precipitating injury (IPI) in childhood, duration of epilepsy and seizure frequency. In patients with TPA there was a trend toward younger age at IPI as compared with patients without it. Quantitative analysis of TP demonstrated significant atrophy in 42 (35%) of 120 patients with HS. The TP volume was reduced mainly ipsilateral but also contralateral to HS in some cases. In patients with right HS, the mean volume of ipsilateral TP was 15% less than the mean volume of the corresponding lobe in controls, whereas in patients with left HS, the mean

volume of ipsilateral TP was 13% less than the mean volume of the corresponding TP in controls. Patients with and without history of FS did not differed significantly in TP volume. The TP volume also failed to correlate with seizure frequency. The volume of TP was negatively correlated with duration of epilepsy, ipsilateral and contralateral to the HS. The degree of TP volume asymmetry index was not associated with the presence of TPA.

**Conclusion:** Three quarter of ELT patients with HS show TPA on coronal FLAIR images, always ipsilateral to HS in unilateral cases, with the anteromedial zone being affected in all. In bilateral HS, TPA is present ipsilateral to the more affected hippocampus in 70% of the cases. TPA occurring in 87% of left sided HS patients suggests a more widespread involvement when the dominant hemisphere is affected. There is an association between TPA and a younger age at seizure onset, whereas the patient age and the disease duration are negatively correlated with TP volume, ipsilateral and contralateral to HS.

**KEY WORDS:** hippocampal sclerosis, temporal lobe pole, MRI.

\*Alterações estruturais do pólo temporal na esclerose hipocampal: estudo baseado na seqüência Flair e na volumetria por ressonância magnética (Resumo). Tese de Doutorado, Universidade Federal de São Paulo – Escola Paulista de Medicina. Orientador: Nitamar Abdala. Co-orientador: Jacob Szejnfeld.

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## POST-CRANIOTOMY HEADACHE AFTER SURGERY FOR TREATMENT OF CEREBRAL ANEURYSMS (ABSTRACT)\*. THESIS. SÃO PAULO, 2006.

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**Introduction:** Post-craniotomy headache can cause a great repercussion on the quality of life of those who suffer it. However, literature on this subject lacks prospective studies on this condition. We studied the behavior and characteristics of the headache on the first six months after craniotomy.

**Method:** Patients with cerebral aneurysms were evaluated at the Clinics Hospital of the University of São Paulo Medical School, between 10/17/2002 and 10/02/2003 in the pre-surgical period, and followed during six months after the surgery. We used semi-structured interviews, headache diaries, Hospital Anxiety and Depression Scale, Epworth Sleepiness Scale, SF-36 and McGill Pain Questionnaire. Dentists evaluated the presence of temporomandibular disorder in the post-surgical period.

**Results:** 79 patients were included, with a mean age of 45.3 years, 64.6% were female, and 72 concluded the follow-up. 87 craniotomies were per-

formed (pterional: 89.7%; frontal: 4.6%; orbitozygomatic: 5.8%). Post-craniotomy headache was observed in 91.1%, early in the post-surgical period (4 days), being significantly more precocious in those with headache caused by subarachnoid hemorrhage in the pre-surgical evaluation. There were changes in the headache diagnosis, side and sites, after surgery that did not change during the follow-up period. The frequency of the headache had an average increase of 14 days (median=1) on the first trimester of the pos-surgical period, compared to the trimester before surgery and continued at a rate of 6.9 days (median=0) higher on the second trimester. There was an average decrease of 7.9 days (median=1) from the first to the last three months of follow-up. The presence of subarachnoid hemorrhage did not influence headache frequency. There was a positive relation between headache frequency and depressive and anxiety symptoms. The headache on the second trimester

of the post-surgical period was significant related to temporomandibular disorder. Post-craniotomy headache based on the International Headache Society criteria was observed in 40% of the patients (acute in 11.0%; chronic in 30.2%). McGill Pain Questionnaire: PRI was positively and significantly related to the intensity of the anxiety and had lower scores in the pterional approach; the number of words chosen was higher in women. SF-36: the scores were significantly lower than the ones found on a large Brazilian urban sample. The presence of anxiety and frontal craniotomy were associated with significant lower scores on bodily pain domain, and higher headache frequencies were significantly associated with lower scores

on bodily pain and social functioning.

**Conclusion:** Post-craniotomy headache had a high incidence, an early beginning, different features and a higher frequency than previous headaches and was associated with temporomandibular disorder, depressive and anxiety symptoms and with a significant repercussion on quality of life. Its frequency decreased with time. Pain was more intense in women, anxious persons and in those with frontal and orbitozygomatic approach.

**KEY WORDS:** headache/classification, craniotomy, pain/postoperative, pain measurement, temporomandibular joint dysfunction syndrome, intracranial aneurysm, quality of life.

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## EFFECT OF RESPIRATORY PHYSICAL THERAPY MANEUVER ON THE CEREBRAL HEMODYNAMIC (ABSTRACT)\*. THESIS. CURITIBA, 2006

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The respiratory physiotherapy has an extremely important and recognized role on the appropriate assistance to patients victims of head injury. Knowing the influence of respiratory system on the cerebral hemodynamic, this study proposes to observe the repercussion of respiratory physiotherapy techniques as Vibration and Compression, expiratory flow increase and endotracheal suction on the mean arterial pressure, intracranial pressure, cerebral perfusion pressure, jugular venous oxygen pressure and jugular venous oxygen saturation.

The sample consisted of 20 patients with head trauma, a Glasgow Coma Scale  $\leq 8$ , sedated, paralysed (Ramsay=6), intubated and mechanically ventilated, admitted in Adult Intensive Care Unit of Trabalhador Hospital in Curitiba-PR. There were 18 males (90%) and 2 females (10%), mean age 33.5 ( $\pm 11.94$ ) years and Apache II score 26.65 ( $\pm 4.08$ ).

The protocol consisted of physiotherapy techniques application of vibration and compression, expiratory flow increase (5 minutes in each chest wall) during 10 minutes for each technique. After, the suction was made, being preceded by instillation of 5 mL saline and 3 hyperinflations and hyperoxygenations. The variables were recorded after the end of

each technique of vibration and compression, expiratory flow increase and suction, besides 10 minutes after the end of suction. Between each technique, happened a 5 minutes period of rest. The data were averaged statistically by ANOVA, Newman-Keuls and t Student tests. The normality condition of data were averaged by Kolmogorov-Smirnov. Values of  $p < 0.05$ , indicate statistically significant. The results show the maintenance of mean arterial pressure, intracranial pressure, cerebral perfusion pressure, jugular venous oxygen pressure and jugular venous oxygen saturation during the techniques of vibration and compression, and expiratory flow increase. However, in relation to suction, there was an increase of mean arterial pressure, intracranial pressure, with maintenance of cerebral perfusion pressure, jugular venous oxygen pressure and jugular venous oxygen saturation and return to baseline mean arterial pressure and intracranial pressure 10 minutes after the end of suction.

Concluding, the respiratory physiotherapy techniques (vibration and compression, expiratory flow increase) do not promote cerebral hemodynamic repercussion, unlike suction, in severe head injury patients, mechanically ventilated, sedated and paralysed.

**KEY WORDS:** physical therapy, respiratory, brain.

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