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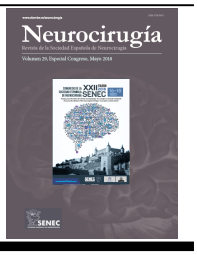

C0347 - INTRACRANIAL DYNAMICS IN THE SUPINE AND STANDING POSITIONS: DIFFERENCES BETWEEN SECONDARY HYDROCEPHALUS, IDIOPATIC NORMAL PRESSURE HYDROCEPHALUS, PSEUDOTUMOR CEREBRI AND CHIARI MALFORMATION

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Resumen

Objectives: Differences between various pathological situations in intracranial pressure (ICP) dynamics during body posture changes are scarcely studied. The aim of this study is to determine how different parameters extracted from ICP recordings during the change from supine to standing vary in diverse pathologies.

Methods: We retrospectively reviewed patients that underwent computerized ICP monitoring in whom at least 30 minutes of data before and after a postural change from supine to standing was available. 31 subjects with quantitative and qualitative normal overnight ICP recording (control group) were compared with patients diagnosed of iNPH (n = 99), secondary hydrocephalus (n = 28), Chiari malformation (n = 27) and pseudotumor cerebri (n = 8). SPSS 21 was used for statistical analysis, considering significance at $p < 0.05$.

Results: Compared to the control group, statistically significant increase in mean ICP, dispersion, pulse pressure (PP), systolic raising coefficient (dPdt) and pressure-pulse correlation coefficient (RAP) was detected in both positions in all groups. During the postural change, pattern of ICP variations was similar in control group and iNPH patients (mean ICP and P decreasing, and dispersion, PP and dPdt increasing when standing position is acquired). In the other conditions, some peculiarities were detected: in secondary hydrocephalus there was no increase in PP in standing position, in Chiari malformation the difference of ICP (ΔICP) and P (ΔP) between supine and standing position was significantly reduced, and in pseudotumor cerebri there was no increase in PP when acquiring standing position and ΔP was also reduced as a consequence of a lower decrease in standing P.

Conclusions: Variations of ICP during changes in body posture are similar in subjects with normal ICP recording and iNPH patients. Some previously undescribed peculiarities have been detected in secondary hydrocephalus, Chiari malformation and pseudotumor cerebri.