

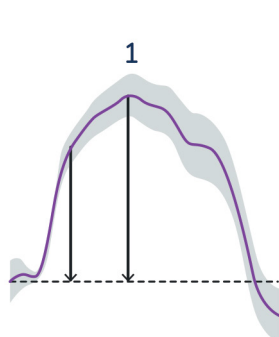


pulse waveform morphology and pathophysiology in the elderly

#Case report

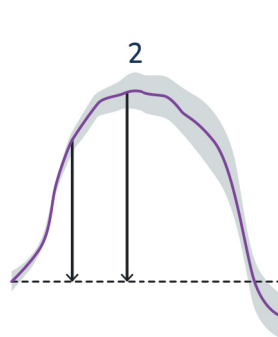
Title: Elderly non invasive intracranial pressure monitorization: a report of wave morphology and cerebral compliance. Bueno et al. Brazilian Journal of Development (2021).

Objective: Report the case of an elderly woman with significant alteration of cerebral compliance, after noninvasive ICP monitoring.



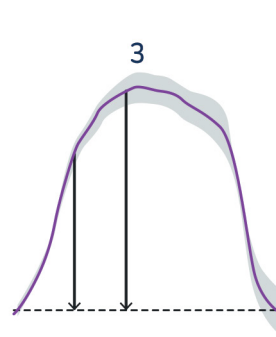
Ratio P2/P1=
1.32 (1.11, 1.58)

Norm. TTP = 0.350
Sample size = 79
Heart rate = 102 bpm



Ratio P2/P1=
1.32 (1.14, 1.52)

Norm. TTP = 0.343
Sample size = 73
Heart rate = 100 bpm



Ratio P2/P1=
1.34 (1.20, 1.50)

Norm. TTP = 0.356
Sample size = 84
Heart rate = 98 bpm

Key: P2/P1 ratio > 1.0
indicating changes in
cerebral compliance.

Case description: A 78-year-old woman, residing in a long-stay center for the elderly, classified as independent according to the Katz Scale, presenting psychiatric disorders and systemic arterial hypertension as comorbidities and

daily use of enalapril 20 mg/day, mirtazapine 30 mg/day, periciazine 9 mg/day and simvastatin 20mg/day. She underwent intracranial pressure (ICP) monitoring with the noninvasive device developed by brain4care,

presenting altered ICP pulse waveform morphology, with P1/P2 ratio of 1.34, indicating a possible change in brain compliance. During ICP monitoring, her blood pressure was recorded at 130/90 mmHg.

Main findings

In this case study, several comorbidities and use of multiple medications were observed, which are important factors in explaining the potential alterations in brain compliance indicated by the ICP pulse waveform morphology analyzed. Considering the difficulty in dealing with these multiple conditions and in identifying intracranial changes, the availability of noninvasive technology can help in patient care.

Conclusion: The introduction of a device that permits the noninvasive identification of changes in the ICP pulse waveform morphology can establish a more accurate diagnosis, besides being used as an important vital sign to be monitored. It can thus be a practical ancillary device in early diagnosis, treatment, prevention and can contribute to quality of life for the aging population.



For more details,
see the full article:
DOI: 10.34117/bjdv7n1-470

Reference: Bueno, B, Barbosa, C, Borato, D, Velloso, JC. Monitorização Não Invasiva Da Pressão Intracraniana Em Idosos (Noninvasive Intracranial Pressure Monitoring in the Elderly): Um Relato De Morfologia De Onda E Complacência Cerebral / Elderly Non Invasive Intracranial Pressure Monitorization: A Report Of Wave Morphology And Cerebral Compliance. Brazilian Journal of Development. 2021. 7. 6952-6960. 10.34117/bjdv7n1-470.

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