

Optic disc height

Patients with elevated [intracranial pressure](#) (ICP) tend to have [optic disc edema](#) and a thicker [optic nerve sheath diameter](#) (ONSD). However, the cut-off value of the [optic disc height](#) (ODH) for evaluating elevated [ICP](#) is not clear.

Yu et al. conducted the evaluation of ultrasonic ODH and investigated the reliability of ODH and ONSD for elevated ICP. Patients suspected of having increased ICP and who underwent a [lumbar puncture](#) were recruited. ODH and ONSD were measured before lumbar puncture. Patients were divided according to elevated and normal [ICP](#). They analyzed the correlations between ODH, ONSD, and ICP. ODH and ONSD cut-off points for the identification of elevated ICP were determined and compared. There were a total of 107 patients recruited for this study, 55 patients with elevated ICP and 52 with normal ICP. Both ODH and ONSD in the elevated ICP group were higher than in the normal group [ODH: median 0.81 (range 0.60-1.06) mm vs. 0.40 [0-0.60] mm, $p < 0.001$; ONSD: 5.01 ± 0.37 mm vs. 4.20 ± 0.38 mm, $p < 0.001$]. ICP was positively correlated with ODH ($r = 0.613$; $p < 0.001$) and ONSD ($r = 0.792$; $p < 0.001$). The cut-off values of ODH and ONSD for evaluating elevated ICP were 0.63 mm and 4.68 mm, respectively, with 73% and 84% sensitivity and 83% and 94% specificity, respectively. ODH combined with ONSD showed the highest value under the receiver operating characteristic curve of 0.965 with a sensitivity of 93% and a specificity of 92%.

Ultrasonic ODH combined with ONSD may help monitor elevated ICP non-invasively ¹⁾

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Yu ZY, Xing YQ, Li C, Wang SB, Song XN, Wang CC, Wang LJ. Ultrasonic optic disc height combined with the optic nerve sheath diameter as a promising non-invasive marker of elevated intracranial pressure. *Front Physiol.* 2023 Mar 10;14:957758. doi: 10.3389/fphys.2023.957758. PMID: 36969579; PMCID: PMC10036414.

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