

Optic nerve sheath diameter

Dilatation of the [optic nerve sheath](#) has been shown to be a much earlier manifestation of [ICP](#) rise ^{1) 2)}.

ONSD is a simple noninvasive measurement on initial CT in patients with TBI that could be a surrogate for ICP monitoring. However, further studies are warranted ³⁾.

Maissan et al. found that the [optic nerve sheath diameter](#) was distended during and after [endotracheal intubation](#) (ETI) in anesthetized patients, and intravenous [lidocaine](#) attenuated this effect ⁴⁾.

For Liu et al. ONSD measured via head CT correlates with ICP and can predict the requirement for surgery in patients with [TBI](#) following [admission](#) to the [emergency department](#) ⁵⁾.

In a study of Agrawal et al. [optic nerve sheath diameter](#) demonstrated a modest, statistically significant correlation with [intracranial pressure](#), a predetermined level of diagnostic accuracy to justify routine clinical use as a screening test was not achieved. Measurement of [optic disc](#) elevation appears promising for the detection of elevated intracranial pressure, however, verification from larger studies is necessary ⁶⁾.

Optic nerve sheath diameter ultrasonography

see [Optic nerve sheath diameter ultrasonography](#).

References

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