Optic nerve ultrasound may ID increased intracranial pressure

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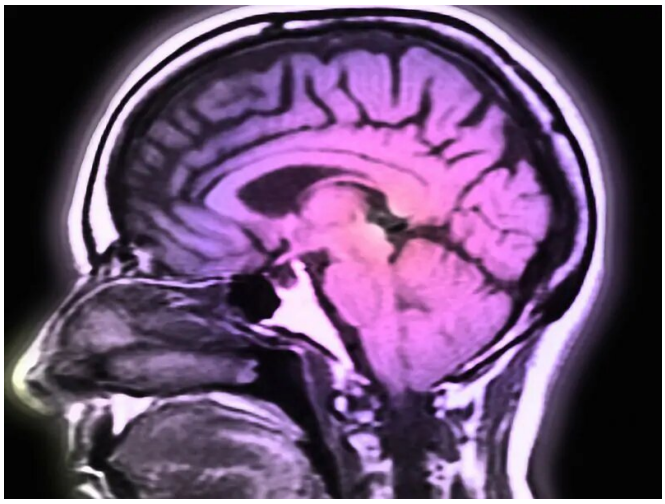

(HealthDay)—Optic nerve ultrasonography can help diagnose increased intracranial pressure with high specificity and sensitivity for patients with traumatic and nontraumatic brain injury, according to a review published online Nov. 19 in *Annals of Internal Medicine*.

Alex Koziarz, from University of Toronto, and colleagues conducted a systematic review to examine the accuracy of optic nerve ultrasonography for diagnosing increased intracranial pressure in children and adults. Data were included from 71 eligible studies with 4,551 patients. Of these studies, 61 included adults. Researchers rated 35 studies as having a low risk for bias.

The researchers found that in patients with traumatic brain injury, the pooled sensitivity, specificity, positive likelihood ratio, and negative likelihood ratio of optic nerve ultrasonography were 97 percent, 86 percent, 6.93, and 0.04, respectively. In patients with nontraumatic brain injury, the corresponding estimates were 92 percent, 86 percent, 6.39, and 0.09. Among studies stratified by patient age, operator specialty and training level, reference standard, sonographer blinding status, and cutoff value, the accuracy estimates were similar. For optic nerve sheath dilatation on ultrasonography, the optimal cutoff was 5.0 mm.

"Optic nerve ultrasonography is an accurate diagnostic tool that may be useful for various patient populations and situations," the authors write. "It is noninvasive, quick, and easy-to-use and can enable health care professionals to triage patients with suspected increased intracranial pressure."

One author disclosed ties to Acelity Corporation and Innovative Trauma Care Corporation.

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