
CT for Atraumatic Headache in ER Patients: Good or Bad?



A new study published in the *American Journal of Roentgenology* shows that patients who underwent CT examination for atraumatic headache in an initial emergency department (ED) visit were less likely to return to the ED within 30 days. However, researchers caution that the study should not be misinterpreted as a call for increasing the practice of ordering CT scans for atraumatic headache.

See Also: [Ruling out CT for Minor Head Trauma](#)

"Our findings do not support such a recommendation. Rather, we are calling attention to the downstream effects of these scans, and suggesting that future attempts to define appropriateness of imaging within the ED will need to account for their potential to lessen future care utilisation," says study co-author Brian W. Patterson, MD, MPH, assistant professor at the BerbeeWalsh Department of Emergency Medicine, University of Wisconsin School of Medicine and Public Health, Madison.

Dr. Patterson and colleagues conducted the study at Northwestern Memorial Hospital, Chicago, Illinois. Of 80,619 total patient visits to the ED during the study period, 922 ED discharges with a chief complaint of headache were included. A total of 139 (15.1 percent) patients revisited within 30 days, and the return rate was 11.2 percent amongst patients who underwent CT at their initial visit and 21.1 percent amongst those who did not.

There are two possible explanations for the study finding: 1) CT provided reassurance to patients, thereby preventing return ED visits; and 2) outpatient providers, particularly primary care clinicians, may be able to better focus on and manage the symptoms of an acute headache after a CT scan has been performed in the ED setting to rule out emergent pathology.

The authors have noted the growing trend of criticism associated with the increased rate of CT imaging in EDs. The study states: "A variety of efforts have been aimed to reduce CT use within the ED given the costs and risks associated with ionising radiation. Specifically, the use of CT of the brain for patients with atraumatic headache has been identified as potentially inefficient, as evidenced by wide variation in ordering rates between ED providers and low diagnostic yields."

According to Dr. Patterson, the issue places emergency care at the centre of two conflicting trends: an increasing scope of practice as a referral centre for outpatient diagnosis and a simultaneous increase in scrutiny of ED imaging and resource utilisation. This conflict highlights the need "to better understand how imaging use at an initial ED visit influences subsequent resource utilisation and outcomes," he adds.

Source: [American Roentgen Ray Society](#)

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