

Dizziness in the Emergency: A 1 Year Prospective Study

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Abstract : Background: The management of dizziness and vertigo can be challenging in the emergency department (ED). It is important to rapidly diagnose vertebrobasilar stroke (VBS), as therapeutic options such as thrombolysis and anticoagulation require prompt decisions. Objective: This study aims to assess the rate of misdiagnosis in patients with dizziness caused by VBS in the ED. Methods and Results: The cohort was comprised of 82 patients with a mean age of 55 years; 51% were women and 49% were men. Among dizzy patients, 15% had VBS. We used Cohen's kappa test to quantify the agreement between two raters - namely, emergency physicians and neurologists - regarding the causes of dizziness in the ED. The agreement between emergency physicians and neurologists is low for the final diagnosis of central vertigo disorders and moderate for the final diagnosis of VBS. The sensitivity of ED clinical examination for benign conditions such as BPPV was low at 56%. The positive predictive value of the ED clinical examination for VBS was also low at 50%. Conclusion: There is a substantial rate of misdiagnosis in patients with dizziness caused by VBS in the ED. To reduce the number of missing diagnoses of VBS in the future, there is a need to train emergency physicians in neuro vestibular examinations, including the HINTS examination for acute vestibular syndrome (AVS) and the Dix-Hallpike (DH) maneuver for episodic vestibular syndrome. Using video head impulse tests could help reduce the rate of misdiagnosis of VBS in the ED.

Keywords : dizziness, vertigo, vestibular disease, emergency

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