Nausea and Vomiting in an Elderly Woman

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Introduction

Nausea and vomiting are common complaints in the primary care setting, accounting for up to 1.6% of presenting complaints at general practice visits.1 While the most common cause of nausea and vomiting, gastroenteritis,1, 2 accounts for around 40% of episodes which require primary care medical attention,1 it is much less common in the elderly, accounting for only around 20% of episodes requiring medical attention in patients over 65.1 Overall around 1 in 10 patients presenting to their GP with nausea and vomiting will remain undiagnosed, and this proportion almost doubles in patients over 65.1

The following case demonstrates that seemingly benign symptoms of nausea and vomiting may indicate a malignant process. While this is rare it is important to always have a high index of suspicion, especially in the elderly, who often present with atypical presentations of medical conditions.

Case Report

An 85 year old East Asian woman presented to the emergency department with EMS following a 30 minute episode of nausea and vomiting at her nursing home. The vomiting had subsided, however she remained nauseous. Her past medical history was significant for atrial fibrillation, chronic kidney disease, type two diabetes mellitus, hypercholesterolemia, hypertension, and an ischemic stroke. She was on several medications, notably warfarin for stroke prevention.

The patient described the episode of nausea and vomiting having sudden onset while she was playing cards with friends. There was no hematemesis, and no associated chest pain, dyspnea, or diaphoresis. Around the time of onset she described feeling dizzy, which upon further questioning was a sensation of the room spinning around her (objective vertigo). This was not associated with any auditory symptoms or ear pain and was not dependent on head movement. It was also not associated with any focal neurological signs, and a screening cranial nerve, motor, and sensory exam was normal.

As the interview progressed the patient began experiencing a midfrontal pounding headache, which she had no prior history of. She also became somnolent and more difficult to interview, keeping her eyes closed unless asked the same question numerous times.

Laboratory results were mostly unremarkable, other than an elevated troponin I of 0.183 ug/L (normal <= 0.040 ug/L). Serum creatinine was elevated at 177 umol/L, in keeping with her chronic kidney disease. Her INR was 1.01 despite being on warfarin.

To rule out a central cause for the patient’s vertigo, and based on overall clinical suspicion, a head CT scan was done (Figures 1 and 2). The patient’s rapid progression of symptoms (vertigo, nausea, and vomiting progressing to include headache and somnolence), her stroke risk factors (ischemic: atrial fibrillation,
type two diabetes mellitus, hypercholesterolemia, hypertension, and past history of an ischemic stroke; hemorrhagic: warfarin ingestion), and the elevated troponin I were the main clinical indicators of a central nervous system etiology.

The neurosurgical team was consulted. An extraventricular drain was inserted and the patient was admitted to the trauma/neurosurgery ICU. Her clinical status improved initially, however she had a subsequent repeat posterior fossa bleed which required further surgical intervention. Three weeks after her presentation to the emergency department the patient passed away due to complications of the repeat intracranial hemorrhage.

No definite cause for the hemorrhages was determined on CTA or MR/MRA imaging during the patient's stay in hospital, however there was equivocal evidence of a PICA aneurysm rupture.

The majority of central nervous system causes of nausea and vomiting are associated with increased intracranial pressure. Examples include brain malignancy, intracranial hemorrhage, intracranial abscess, meningitis, and hydrocephalus. Of all intracranial hemorrhage intracerebral hemorrhage is one of the forms most commonly associated with vomiting.

In one study of intracerebral hemorrhage, nausea and vomiting were each found in approximately 37% of cases. The most common symptom was altered level of consciousness which was found in 44% of cases, followed by limb dysfunction in around 43% of cases and then headache in around 39% of cases. Other estimates of the frequency of nausea and vomiting in intracerebral hemorrhage are as high as 50%. Looking at cerebellar hemorrhage specifically the most common symptoms in the aforementioned study were dizziness, nausea, and vomiting, each occurring in around 56% of cases. Headache was the next most common symptom, followed by altered level of consciousness.

The use of head CT in working up patients presenting to the emergency department with vertigo is controversial, because it is use is very common yet the utility remains questionable. In a national sample of American emergency departments the use of brain imaging (CT/MRI) for emergency department presentations of vertigo-dizziness increased by almost 70% over a decade, yet there was no increase in the rate of CNS diagnoses during this time period. In a recent retrospective chart review of patients who presented to a group of American urban emergency departments with dizziness-vertigo, almost half of the 1681 patients received a CT head scan but only six had significant pathology requiring surgery. Another retrospective chart review on 424 emergency department patients who received a head CT scan for dizziness also reported a low diagnostic yield for findings requiring emergent intervention, however it went on to describe the ability of head MRI to change the diagnosis made of CT scan acutely 8% of the time. The issue of what (if any) neuroimaging to perform for query central vertigo is further complicated by the fact that MRI sensitivity is lowest in the first 24 hours after onset of stroke, and when the stroke occurred in the cerebellum or brainstem.

Overall, there is no firm official guideline to direct the use of CT for vertigo in the emergency department. According to the American College of Radiology Appropriateness Criteria, CT head with or without contrast “may be appropriate” in patients with new onset episodic vertigo and in patients with vertigo with no hearing loss in the context of an otherwise normal neurological exam. Currently the best approach is to avoid CT head in patients with a low risk of stroke, absence of focal neurological findings on history or physical, and with symptoms...
How Big is that Baby Bump? Learner Variation in Measuring Symphysis-Fundal Height

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Abstract

Background and Objectives: A decreasing number of Canadian family physicians are offering obstetrical care to their patients. Of those family physicians who do, many are doing so in group settings where maternity patients are cared for by multiple care providers. Therefore, it is necessary for training and practising family physicians to make accurate and reproducible prenatal measurements. This study investigates the inter- and intra-observer variability in symphysis fundal height (SFH) measurements among first year family medicine residents.

Methods: Three SFH measurements were taken by eight first year family medicine residents on pregnant patients between 26 and 38 weeks gestation from a low-risk primary care obstetrical practice. Measurements were made using unmarked measuring tapes and residents were blind to the patients’ gestational ages. Tapes were measured against a metal ruler standard and lengths recorded.

Inter-observer variation was determined by calculating the mean inter-observer range of SFH measurements across all patients. Intra-observer variation was determined by calculating the mean intra-observer range across all patients.

Results: Mean inter-observer and intra-observer variations were 6.4 cm and 1.5 cm, respectively.

Conclusions: While residents can reliably reproduce their own SFH measurements these measurements are not consistent between residents. In order to ensure reliable continuity of SFH measurements among prenatal care providers, further research is needed to determine the ideal educational methods to teach residents how to accurately obtain SFH measurements. Doing so has the potential to maximize detection of fetal growth anomalies and may minimize the need for less cost-effective and less available resources, such as ultrasound.

Key Words: Education and/or Curriculum development, Clinical Education Methods, Prenatal care

Introduction

Comprehensive and regular prenatal care is an essential component of a healthy pregnancy in which family physicians play a key role.1 Routine prenatal care incorporates a range of tools and techniques that monitor fetal growth including serial measurements of symphysis-fundal height (SFH).2 Abnormalities of this parameter may suggest complications (e.g., large/small for gestational age, oligo/poly-hydramnios, structural abnormalities, etc.). Therefore, accuracy of the SFH measurement may reduce the unnecessary use of more costly and potentially less available resources, such as additional ultrasound studies. As a result, it is important for prenatal care providers, including family physicians and their trainees, to become skilled in this measurement.