



## IS DIZZINESS ALWAYS COVERING A SERIOUS ILLNESS?

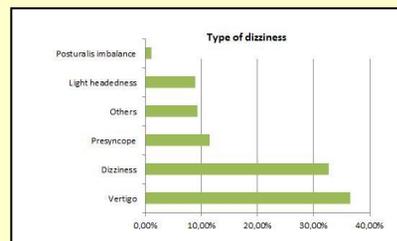
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### Facts of dizziness

- One of the most frequently examined symptoms in emergency departments. (2-4%)
- Dizziness is associated with a variety of neurological, otological, psychiatric and cardiovascular conditions.
- In most cases of dizziness diagnostic procedures reveal less severe illness, but it could refer to more serious diseases like posterior fossa infarct.
- HINTS (Head Impulse, Nystagmus, Test of Skew) can help to identify vertebrobasilar stroke in acute vestibular syndrome (100% sensitivity). It appears more sensitive than CT scans (16%) and MRI with DWI (88%) in acute phase (24-48h).
- Despite the new approach, for the accurate diagnosis after physical examination and lab test cranial CT scan is still quite often performed.



### Objective

Our aims were to examine which factors influenced the indication of cranial CT scan in patients with dizziness.

### Evaluation method

Retrospective study of 471 adult patients documentations between 01. 01. 2010 and 31.12. 2010 on the Emergency Department of Kaposi Mór Teaching Hospital. Exclusion factors: serious mental conditions, GCS < 9, age < 18.

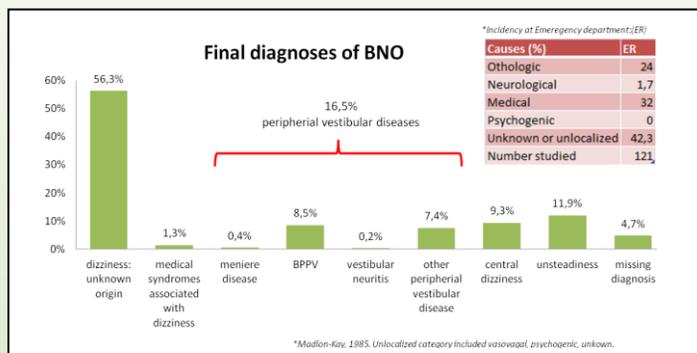
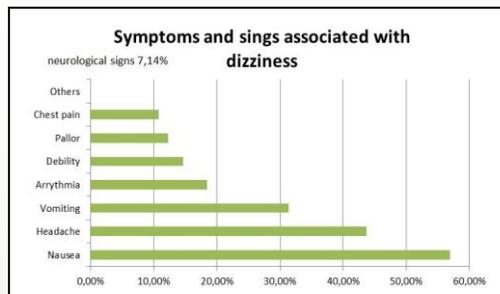
## Results

**In general :** 70.7% of all patients were women. The average age was 58, the peak of the incidence of dizziness was between age of 70 and 79. 61.57% of all patients were older than 60.

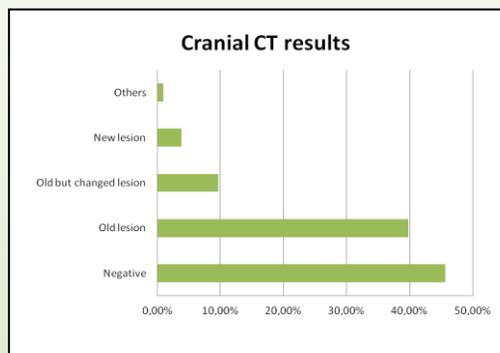
- 43.9% (209/471) of all patients had cranial CT scan.
- 13.4% (28/209) of them showed obviously new lesions (5.94% of all patients).

### These factors showed coherency with CT indication

- Old age (over 60 yrs) ( $p=0,010$ )
- Headache (except migraine) ( $p=0,001$ )
- Pallor during physical examination (without hypotension) ( $p=0,031$ )
- Medication (antipsychotic medication) ( $p=0,019$ )
- Neurological symptoms
  - Limb weakness ( $p=0,046$ ) or numbness ( $p=0,05$ ), facial palsy ( $p=0,002$ ), speech disorder ( $p=0,001$ )
- Previous fainting ( $p=0,009$ )
- Stroke ( $p=0,002$ ) and ischaemic heart disease ( $p=0,034$ ) in the PMH



| *Incidency at Emergency department (ER) |      |
|---|------|
| Causes (%)                              | ER   |
| Othologic                               | 24   |
| Neurological                            | 1,7  |
| Medical                                 | 32   |
| Psychogenic                             | 0    |
| Unknown or unlocalized                  | 42,3 |
| Number studied                          | 121  |



### Factors associated with absence of new lesion on CT scan

- Older age (over 60 yrs)
- Presence of headache
- Pallor skin
- Neurological signs (limb weakness or numbness, facial palsy, speech disorder)
- Previous fainting and stroke or ischaemic heart disease in the PMH

### Factors associated with new lesion on CT scan

- Vision problem: double/blurred vision,
- Continuous dizziness without any known provoking factors
- The existence of present medication (antihypertensive medication, NSAID's muscle relaxant, anxiolytic and antivertigo drugs)

## Conclusion

- Life threatening causes of dizziness can be correctly diagnosed in our Emergency Department. In the remaining cases further neuro-ophthalmological and neuro-otological examinations are needed to set up the accurate diagnosis of the patient.
- New viewpoint emphasises that CT performance is no longer in the front line of diagnostic steps to identify underlying cause of dizziness, but the risk of misdiagnosing any serious or life-threatening disease still prevails and leads ordering cranial CT scan in our Emergency Department.
- The risk score of requirement for cranial CT scan needs further investigation, but vision problems and continuous dizziness without any provoking factors are worthy of consideration for further neuroimaging testing.

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