

Incidence of Vertigo distribution among young adult and elderly in patients attending Al-Diwaniya Teaching Hospital . Al-Diwaniya.

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Abstract:

This study is prospective in nature, It consider 110 patients with vertigo who were assessed between April and December 2010 at E.N.T out patient department of otolaryngology, in Al Diwania teaching hospital, in Diwania city, Iraq. The study is designed to assess the incidence of vestibular and non vestibular vertigo and their association with tinnitus, hearing loss, migraine in Young adult and elderly. All patients were assessed by questionnaire method and by pure tone Audiometry.

Results: the incidence of vestibular vertigo was 69.1% while non vestibular vertigo is 30.9 %,

vestibular vertigo was inversely related to the age while non vestibular vertigo directly related to the age

The percentage of association between tinnitus, migraine, hearing loss with vestibular and non vestibular vertigo were {71%,6%),(29%,35%),(74%,18%)} correspondingly.

Conclusion; vestibular vertigo was more common than non vestibular vertigo in young adult and elderly, and it is significantly associated with tinnitus and hearing loss but not with migraine.

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Introduction

Dizziness is a general term for a sense of disorientation , vertigo is a subtype of dizziness defined as illusion of movement , usually a sense of rotation ⁽¹⁾. Dizziness and vertigo are among the most common symptoms causing the patient To visit the physician over all incidence of dizziness , vertigo , imbalance 5-10% , and it reach 40% in patient Older than 40 years old ⁽¹⁾. Migraine more prevalent 10% , about 40% of Patient With migraine having vertigo , motion sickness , mild hearing loss , there for differentiate migraine from primary inner ear disease some times difficult ⁽²⁾.

Aim of study :

To assess the incidence of vestibular and non vestibular vertigo and their association with tinnitus , migraine , hearing loss in young adult and elderly patients .

Method

This study is prospective in nature , consisted of 110 patients complaining from vertigo , they had been assessed at E.N.T. department in Al-Diwania Teaching Hospital , in Al-Diwania city , between April 2010 to December 2010 , the age range from 30-80 year . They were 64 males and 46 females . Vertigo , tinnitus , migraine assessed by questionnaire method , while the hearing loss assessed by pure tone audiometry .

During face to face interview , we ask every vertiginous patients the following questions :

- 1- ask the Patient To describe the vertigo :- rotational, spinning , light headness , others , don't know .
- 2- in order to distinguish vestibular from non vestibular vertigo ,we also asked if spinning movement associated with nausea , vomiting , during the turning in the bed ,ear fullness , hearing loss , tinnitus .
- 3- duration of vertigo (minutes , hours , days , don't know)
- 4- for assessment of tinnitus we ask the Patient About any sound in the ear or head lasting 5 minuts or longer .
- 5- for assessment of migraine we ask the Patient If previously diagnosed as migraine by neurologist and received antimigraine treatment or not , also we ask the Patient About symptoms of migraine :- sever headache , usually unilateral, at least 5 attacks during life time, lasting 4 hours - 3days, associated with nausea , vomiting ,change in the vision (zig zag lines or blurring) , need to isolated with light off .
- 6- for assessment of hearing loss , we do pure tone audiometry(PTA) for every Patient By using inter acoustics AA220 audiometer . hearing loss defined as any hearing loss at PTA 0.5- 4KHz , more than 20 dBHL .

in our study we use statistical analysis chi-square test opus 12 foundation Inc. for calculating the X² and P. value , then

compared with statistical values in the tables of statistical books ⁽²⁾. P. values < 0.05 indicate statistical significance .

Results:

Our study include 110 vertiginous partient,76 (69.1%) of them have vestibular vertigo , while remaining 43(30.9%) have non vestibular vertigo , so vestibular vertigo is the

commonest type with statistical significance (table 1) and this may be linked to otological causes of vertigo ⁽³⁾ , and we found that, vestibularVertigo is more common in younger age group of patients and the percentage decrease with increasing age , in reverse to non vestibular vertigo which is more common in older age group as we showed that in table (1)

Table 1 show the distribution of vertiginous patients according to the age groups and type of vertigo .

Age group (years)	Vertibular	%	Non vestibular	%	Total	%`
30-40	26	22.85%	2	2.15%	28	25.4%
41-50	22	73.3%	8	26.7%	30	27.3%
51-60	14	53.8%	12	46.2%	26	23.6%
61.70	8	44.4 %	10	55.6%	18	61.4%
71-80	2	25%	6	75%	8	7.3%
Total	76	69.1%	34	30.9%	110	100%

Calculated X² = 15.739> tabulated X² = 9.49
 P. value 0.00339 it is significant

Also in our study we found that, vertigo more common in male than female in total percentage and both types (vestibular and non vestibular) but without statistical significance as in table(2)

Table (2) distribution of vertiginous patient according to gender and type of vertigo .

Vertigo	Male	%	Female	%	Total	%
Vestibular	46	60.5%	30	39.5%	76	69.1%
Non vestibular	18	52.9%	16	47.4%	34	30.9%
Total	64	58.2%	46	41.8%	110	100%

Calculated X² = 0.555 P. value 0.456
 Calculated X² < tabulated X² so not significant

In our study, tinnitus present in 56 of 110(51%) (n= 56 , 51%) of vertiginous patient , it is significantly associated with vestibular Vertigo, (n=54.71%) while present only in 2 patient with non vestibular Vertigo (n=2,6%). migraine (n= 43 , 31%)is more common in vestibular type but without

statistical significant. hearing loss present in (n= 62.56%) of vertiginous patient . hearing loss was significantly associated with vestibular vertigo (n= 56 , 74%) as shown in table(3)

Table (3) shows the distribution of the vertiginous patients according to the risk factors :

Associated risk factors	Vestibular vertigo		Non vestibular vertigo		Total	
	N	%	N	%	N	%
Tinnitus	54	71%	2	6%	56	51%
No tinnitus	22	29%	32	94%	54	49%
Migraine	22	29%	12	35%	34	31%
No migraine	54	71%	22	65%	76	69%
Hearing loss	56	74%	6	18%	62	56%
No hearing loss	20	26%	28	82%	48	41%

Tinnitus :- calculated X^2 (= 39.921) > tabulated X^2 (= 3.841)

P. value < 0.0005

Migraine :- calculated X^2 (= 0.443) < tabulated X^2 (=3.841)

Pa. value = 0.505

Hearing loss :- calculated X^2 (= 39.992) > tabulated X^2 (= 3.841)

P. value < 0.0005

Discussion:

In our study we found that, vestibular vertigo is significantly higher than non vestibular vertigo, in young adult and elderly patient. This result agrees with: Neuhauser K. et al. (2008)⁽⁴⁾, Neuhauser (2005)⁽³⁾, Kroenke K. et al. (2000)⁽⁵⁾, Yardly L. et al. (1998)⁽⁶⁾. Also in our result we found that, vestibular vertigo is significantly associated with tinnitus, hearing loss, this results agree with: Nicole Evans (2010)⁽⁷⁾, Capinath et al. (2009)⁽⁸⁾, Fagg et al. (2007)⁽⁹⁾, Christopher et al. (2001)⁽¹⁰⁾, Kessinger et al. (2000)⁽¹¹⁾. Also in our result we found that migraine not associated with any type of vertigo. This result disagrees with Lompert et al. (2009)⁽¹²⁾, Gopinath et al. (2009)⁽⁸⁾, Bratberg K. et al. (2005)⁽¹³⁾, Neuhauser et al. (2001)⁽¹⁴⁾.

Conclusion:

We conclude that vestibular vertigo is significantly more common than non vestibular vertigo in young adult and elderly vertiginous patient also vestibular vertigo significantly associated with tinnitus and hearing loss but not with migraine.

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