Analysis of the rule of five-line X-ray image of cervical spine in patients with phlegm-dampness vertigo

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Abstract: Through the analysis and analysis of the characteristics of cervical X-ray images in patients with phlegm-dampness vertigo, the cervical vertebral images of 40 patients with phlegm-dampness vertigo were analyzed by five X-ray imaging findings. Patients with vertigo have five points of X-ray findings in the cervical spine, which can provide clinicians with reliable diagnostic information. Therefore, the five-line X-ray manifestations of cervical spine in patients with phlegm-dampness type vertigo have certain regularity, which can help clinicians choose appropriate treatment methods and facilitate the rational use of medical resources.

1. Introduction

Dizziness is a clinically common syndrome. Glare refers to white or black eyes in front of the eyes. Dizziness refers to dizziness or rotation of surrounding objects. If they coexist, they may be called “dizziness” [1-3]. Mild vertigo can be relieved after closed eyes. In severe cases, it can't stand. It feels like being in the boat, and the rotation is uncertain. Some patients will be accompanied by nausea, vomiting, fainting and other symptoms. Western medicine believes that vertigo is a kind of movement disorder or hallucination [4]. It is the body's inability to correctly identify the space and cause balance disorder in the cerebral cortex. Patients may experience symptoms such as rotation of the object, rotation of themselves and floating feeling. They are often accompanied by nausea, vomiting, blood pressure fluctuations and excessive sweating. Individual patients will have signs of neurological localization [5].

2. Factors affecting vertigo

(1) Gender and age

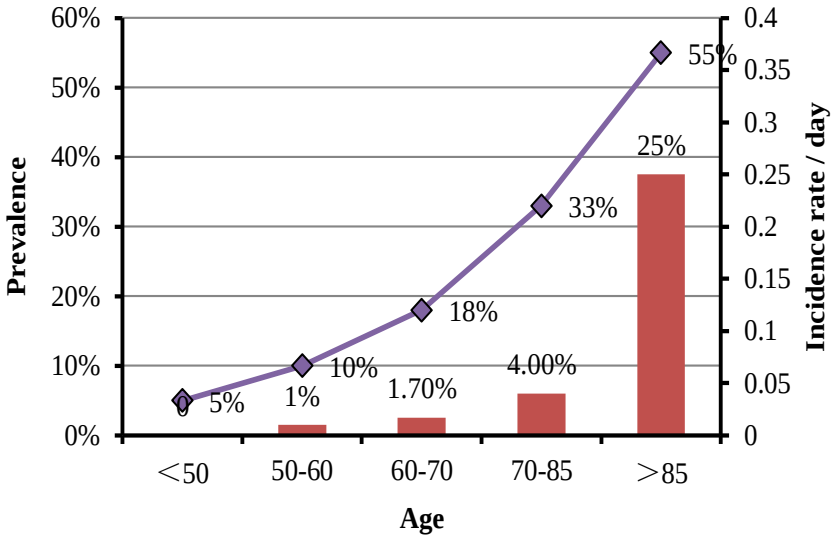

Figure 1 Prevalence and daily incidence of vertigo in different age groups

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All studies generally support that vertigo increases with age, and women are more prone to vertigo than men. Aggarwal reported that the overall prevalence of vertigo was 5.8% for men and 12.1% for women, and women were prone to vertigo with an odds ratio of 2.03. Studies by Jonsson show that the prevalence of dizziness increases with age. The prevalence of dizziness under 50 years old was 5.0%, the prevalence of dizziness in 50-60 years old was 10.0%, the prevalence of dizziness in 60-70 years old was 18.0%, and the prevalence of dizziness in the 70-year-old age group was 33.0. %, then gradually increased the prevalence rate of about 50.0% with age to 85 years after the emergence of a platform. The prevalence of dizziness per day also increased with age, the age group in the 70-year-old group was 4.0%, and the age group in the 90-year-old group had increased to 25.0%. Women in all age groups are more prone to vertigo than men, as shown in Figure 1. Katsarkas found that vertigo was more prevalent among women in 1,194 outpatients over 70 years old [6].

(2) Race

Aggarwal analyzed the prevalence of vertigo in different races and found no significant difference in the prevalence of vertigo among Africans (9.99%) and whites (9.3%) [7].

(3) Chronic diseases

Liu Bo pointed out that some chronic diseases have significant correlations with vertigo, such as hypertension, diabetes, hyperlipidemia, cervical spondylosis and ear diseases [8].

(4) Mental emotions

The survey found that the prevalence of vertigo in the elderly is related to mental and emotional factors such as anxiety, insomnia, irritability, anger, nervousness, depression, etc., and its attack is affected by adverse mental conditions [9].

(5) Other

Xu Xia pointed out that hearing loss, otitis media history, and noise exposure history are risk factors for dizziness [10].

3. Classification of clinical symptoms of dizziness

3.1 The proportion of various types of symptoms

Taking 80 patients as an example, Western medicine diagnosed Benign paroxysmal positional vertigo (BPPV) 2% (4 cases), vertebral-basal artery insufficiency (VBI) 62% (45 cases), cervical vertigo 20% (23 cases), and other diagnoses 16% (8 cases), as shown in table 1 and figure 2.

Table 1 Western medical diagnostic frequency table

Western medicine diagnosis	Number of people	The proportion
Benign paroxysmal positional vertigo	4	0.05
Vertebral-basal artery insufficiency	45	0.5625
Cervical vertigo	23	0.2875
Other diagnosis	8	0.1

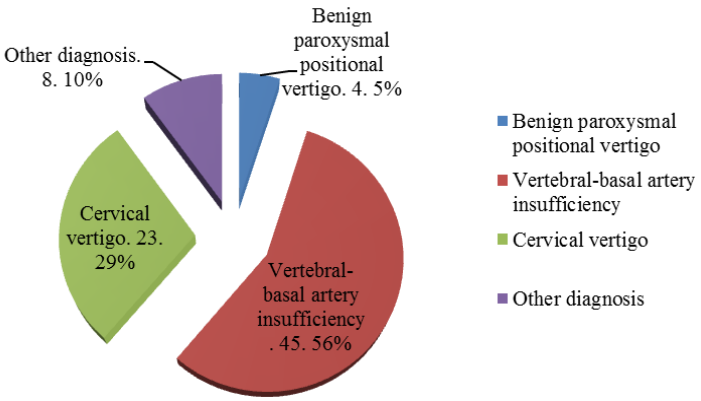

Figure 2 Composition of Western medicine diagnosis of 80 patients

3.2 The distribution of various syndrome types in different age groups and disease groups

Chi-square test (χ^2 =11.853, P<0.05) was performed in all age groups between the four groups of syndromes of wind sputum disturbance, blood deficiency, liver yang sputum and insufficient renal essence (χ^2 =11.853, P<0.05). The difference was statistically significant. The proportion of sputum group in all age groups was the heaviest, and the proportion of qi and blood deficiency syndrome type in the group over 75 years old was significantly higher than that in other groups. (See Table 2, Figure 3)

Table 2 Frequency table of each age group (P/%)

Age	Wind sputum disturbance	Blood deficiency	Liver yang	Insufficient renal essence	Total
20-64	5	6	8	2	21
65-74	2	2	10	3	17
≥75	15	8	14	5	42
Total	22	16	32	10	80

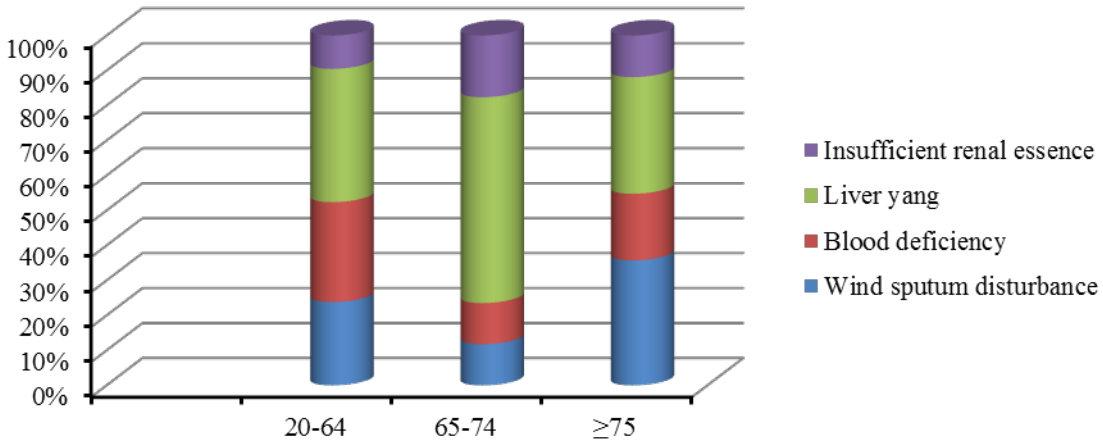

Figure 3 Age distribution table of each syndrome type

4. Research content

4.1 Research methods

Eighty patients with phlegm-dampness type vertigo who were treated and hospitalized in our hospital and Chinese medicine hospital from January 2017 to December 2018 were selected as subjects. Among them, 11 were male and 29 were female, aged 21-67, age average (36.5 ± 3.1) years old, medical history 3-11 years, an average of 6 years. The typical symptoms in the clinic are paroxysmal vertigo, visual rotation, top-heavy, nausea, vomiting, fatigue, slurred speech. Patients have different degrees of clinical symptoms.

The parts and ranges of pictures taken by the GE-DR X-ray machine are shown in Table 3.

Table 3 Range and location of pictures taken by GE-DR X-ray machine

Standing cervical vertebra	Observation content		
Positive position,	Bilateral hook joints and their gaps	Cervical scoliosis	"S" type change
Lateral position	Observing cervical curvature	Sequence exception	intervertebral space stenosis and ligament calcification
Cervical vertebrae	Intervertebral foramen size, morphology		Small joint hyperosteogeny
Left and right double oblique position	Symptoms of caries joint space		

4.2 Observation indicators and statistical methods

(1) Observation indicators

Main observation: 1) Changes in cervical curvature: curvature straightening, angulation or angulation, lateral bending or "S" type change; 2) Stability changes: bilateral double spurs, vertebral spondylolisthesis, stepped dislocation, etc.; 3) Body bone and degenerative changes of the intervertebral disc: hyperplasia of the uncinate joint, facet joint, vertebral body, etc., with small intervertebral foramen, narrow intervertebral space; 4) Ligament calcification: mainly anterior longitudinal ligament and ligament, a few For the posterior longitudinal ligament. 5) Molar joint space: left wide and right narrow, left narrow and right wide, bilaterally symmetrical. The observations were recorded on the basis of X-ray performance.

(2) Statistical methods

All data were statistically analyzed using statistical software SPSS16.0. The count data was expressed as a percentage, and the measurement data was expressed as ($\overline{x} \pm s$). All the count data were analyzed by χ^2 test, and the measurement data were analyzed by *t* test; P<0.05 means that the difference was statistically significant.

4.3 Research results

The results of five X-ray films of cervical spine in patients with vertigo and dampness are shown in Table 4. Of the 200 patients with vertigo, 80 patients with phlegm and dampness syndrome accounted for 37.00%. The patients with this syndrome showed cervical vertebrae by X-ray examination of the cervical spine. Physiological curvature and stability changes, ligament calcification and other clinical symptoms, and the number of vertebral bone and intervertebral disc degeneration was the highest, higher than the number of other observations. The difference was statistically significant (P <0.05). Compared with the patients in each group, the X-ray characteristics of the patients with the syndrome were significant, and the difference was statistically significant (P<0.05).

Table 4 Five-point X-ray results of cervical spine in patients with vertigo

Observation index		n	The proportion
Cervical physiologic curvature change	Straightening	30	0.375
	Angled or inverted bow	10	0.125
	Side bend or "S" type change	15	0.1875
Stability change	Bilateral double sign	26	0.325
	Spondylolisthesis	14	0.175
	Stepped dislocation	33	0.4125
Vertebral bone and degenerative changes of the intervertebral disc	Hook joint bone hyperplasia	24	0.3
	Small joint hyperosteogeny	32	0.4
	Vertebral bone hyperplasia	40	0.5
	Intervertebral space narrowing	42	0.525
Ligament calcification	Anterior longitudinal ligament	38	0.475
	Ligament	20	0.25
Caries joint space	Left wide and narrow	15	0.1875
	Left narrow right width	23	0.2875
	bilateral symmetry	30	0.375
The value of χ^2	8.9		
P	<0.05		

5. Conclusion

Cervical X-ray films have different manifestations in different TCM syndrome types of vertigo patients. The authors analyzed the cervical X-ray findings of patients with phlegm-dampness type vertigo, and summarized the characteristics of cervical X-ray films of this type of vertigo patients. Providing effective diagnostic information for clinicians to guide clinicians in selecting appropriate and effective treatments is conducive to the rational use of medical resources. In conclusion, the five X-ray films of the cervical spine can provide important diagnostic information for patients with phlegm-dampness and vertigo, and help clinicians to provide targeted treatments for patients, which can promote timely treatment, faster recovery and improvement the cure rate.

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