

## Morphology of the vertebral artery in Asian population

M.Kornieieva, Azmy M.Al-Hadidi

Department of Anatomy and Histology, Faculty of Medicine, Tabuk University,  
Department of Diagnostic Radiology and Nuclear Medicine, Faculty of Medicine, University of Jordan  
Tabuk, KSA, Amman, Jordan

### BACKGROUND

Recent clinical trials have shown a rising trend of stroke in Asian population. Approximately 20% strokes of total occur at the vertebrobasilar basin, which responsible for the posterior cerebral circulation. The anatomical features and variability of the third segment of vertebral artery (VA) in Asians are analyzed in this study.

### METHODS

A prospective cohort study of 68 consecutive Asian patients undergoing MRA examination for head and neck in the Department of Radiology of Hospital of University of Jordan, during period from 1.10.2011 to 30.04.2012. The 116 VA were analyzed on the obtained angiograms.

### RESULTS

The third segment (V3) of VA was studied according to its conventional division into vertical, horizontal, and oblique parts. The mean diameter of V3 varied from  $3,18 \pm 0,73$  mm to  $4,28 \pm 1,08$  in the different parts. It prevailed in 91.4% cases on the left and was greater in males, than in females. The distal loop of VA projected downward in 26 cases on the right (78%) and in 28 cases on the left (74%). The tortuosity of loop-formations of V3 was evaluated by angles between their ascending and descending bends.

### CONCLUSION

In comparison with Westerns population, the V3 of VA in Asians has lesser outer diameter, especially along its oblique part; the zero-distance between the occipital bone and horizontal segment of VA occurs more often (up to 26%); the Lang's III type of V3 variability is the most common in Asians.

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