

Abstract:

Background and objectives: There is a paucity of research on the shape of internal jugular vein (IJV) and their association with an individual's morphology and various chronic diseases. Therefore, this study aimed to analyze the anatomy of the IJV across various patients and to relate the differences in anatomy to basic patient characteristics. **Materials and Methods:** This retrospective study included a total of 313 patients who underwent contrast-enhanced neck computed tomography between January 2017 and December 2018. The circumferences of the right and left IJVs were measured at three locations (hyoid bone, cricoid cartilage, and first thoracic vertebra) and parameters affecting the size of the IJV were analyzed. **Results:** The right IJV was significantly larger than the left IJV at each position ($p < 0.001$), and the area of the lumen was the largest at the cricoid cartilage level ($p < 0.001$). After dividing the right IJV data into two groups (above and below the median area), multivariate logistic regression analysis showed that age (odds ratio (OR) 1.040; 95% confidence interval (CI) 1.022-1.058, $p < 0.001$) and body mass index (BMI, OR 1.080; 95% CI 1.011-1.154, $p = 0.023$) affected size. **Conclusions:** The right IJV is larger than the left and has a rhomboid morphology. Age and BMI are significant factors affecting the IJV size.

Reference:

Jeon, J.C., Choi, W.I., Lee, J.H. and Lee, S.H. (2020) Anatomical Morphology Analysis of Internal Jugular Veins and Factors Affecting Internal Jugular Vein Size. *Medicina*. 56(3), p.E135. doi: 10.3390/medicina56030135.

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