Ultrasonographic reference values of median, ulnar nerve and cervical roots in Japanese multicenter study

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Background: The utilities of PNUS have been well known whole the world, whereas PNUS is not common in Japan. There are many literatures about reference values of PNUS. However these values with the differences depending on race are still speculated.

Objective: To make Japanese ultrasonographic reference values of median, ulnar and cervical roots. It is for the purpose that the beginners of PNUS are able to use clinically, NOT for studies demanded high accuracy.

Methods: Subjects were 120 health adult volunteers, 60 male and 60 female. Participating facilities were nine. Physiological parameters were recorded. Equipment was used US machine and probe at each facility. Us parameters were evaluated diameters in cervical roots and cross sectional areas (CSAs) in median, ulnar and roots. Reference values were made by statistical analysis. The correlations were evaluated between US and physiological parameters.

Results: US reference values are at the table in Japanese abstract.

There were significant correlations between weight/BMI and almost CSAs of median and ulnar nerve without arm in ulnar nerve.

Recommendation: This normal reference values aim to be rough standards for the persons or facilities that start PNUS. The reference values of PNUS should be made at each facility with same examiner, equipment and configuration in studies needed high accuracy.