Perbedaan rerata luas penampang lintang nervus ulnaris berdasarkan usg siku posisi ekstensi dan fleksi pada populasi dewasa normal di RSCM = Cross sectional area measurement of ulnar nerve ultrasound of the elbow in extended and flexed arm position

Reiner Reza Rahardja, author

Abstrak

Latar belakang: Pengukuran luas penampang lintang nervus ulnaris menggunakan USG siku pada populasi dewasa normal pada posisi ekstensi dan fleksi telah banyak dilakukan, tetapi belum banyak penelitian yang menyatakan apakah ada perbedaan bermakna antara kedua posisi tersebut. Bila ditemukan perbedaan yang bermakna, maka pengukuran harus memperhatikan posisi siku karena memiliki rerata normal yang berbeda. Selain itu, hingga saat ini belum ada publikasi maupun data mengenai luas penampang lintang nervus ulnaris pada populasi dewasa normal menggunakan USG siku di Indonesia, khususnya pada posisi ekstensi dan fleksi.
Metode: Penelitian ini menggunakan desain deskriptif dan desain potong lintang komparatif dengan data primer. Total sampel 61 nervus ulnaris normal yang dibuktikan dengan pemeriksaan kecepatan hantaran saraf (KHS) dan dilanjutkan dengan pemeriksaan USG pada level terowongan kubital serta 2 cm proksimal dan distalnya, kemudian dilakukan pengukuran luas penampang lintang nervus ulnaris di ketiga level tersebut. Analisis statistik dilakukan dengan uji T 2 kelompok berpasangan, dan perbedaan dianggap bermakna apabila p kurang dari 0,05.
Hasil: Rerata luas penampang lintang nervus ulnaris di level 2 cm proksimal dari terowongan kubital, terowongan kubital, dan 2 cm distalnya secara berurutan pada posisi ekstensi adalah 6,0 ± 0,7 mm2, 6,3 ± 0,9 mm2, dan 5,9 ± 0,7 mm2; pada posisi fleksi juga secara berurutan adalah 5,7 ± 0,8 mm2, 5,2 ± 0,9 mm2, dan 5,7 ± 0,7 mm2. Rerata luas penampang lintang nervus ulnaris pada posisi ekstensi lebih besar secara bermakna (p < 0,001) dibandingkan posisi fleksi di ketiga level tersebut pada populasi dewasa normal.
Kesimpulan: Rerata luas penampang lintang nervus ulnaris di siku pada posisi ekstensi lebih besar secara bermakna dibandingkan posisi fleksi, sehingga posisi siku subjek perlu diperhatikan pada saat pengukuran karena masing-masing posisi memiliki nilai normal yang berbeda signifikan.
.....Background: There are many cross sectional area measurement of ulnar nerve ultrasound of the elbow in extended and flexed position the normal adult population that have been done, but but not many studies have stated whether there are significant differences between the two positions. If significant differences are found, then the measurement must pay attention to the elbow position because it has a different normal mean value. In addition, until now there has been no publication or data on the cross-sectional area of the ulnar nerve in the normal adult population using elbow ultrasound in Indonesia, especially in the position of extension and flexion.
Methods: This study used descriptive design and comparative cross-sectional study design with primary data. A total of 61 normal ulnar nerve samples were proven by nerve conduction velocities examination (NCV) and continued with ultrasound examination at the level of the cubital tunnel and 2 cm proximal and distal, then the cross sectional area of the ulnar nerve at all three levels were measured. Statistical analyses were performed using paired sample t test, and the difference was considered significant if p was less than

0.05.
Results: The mean cross sectional area of the ulnar nerve at the level of 2 cm proximal to the cubital tunnel, cubital tunnel, and distal distal 2 cm in the extension position were 6.0 ± 0.7 mm2, 6.3 ± 0.9 mm2, and 5.9 ± 0.7 mm2, respectively; in the flexion position, they were 5.7 ± 0.8 mm2, 5.2 ± 0.9 mm2, and 5.7 ± 0.7 mm2, respectively as well. The mean cross sectional area of the ulnar nerve in the extension position was significantly greater ($p < 0.001$) than the flexion position at all three levels in the normal adult population.
Conclusion: The mean cross sectional area of the ulnar nerve at the elbow at the extension position was significantly greater than the flexion position, so the elbow position of the subject needs to be considered at the time of measurement because each position has a significantly different normal value.