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**Original article:**

**Case control study of various risk factors in clinically and electrophysiologically diagnosed patients of Carpal tunnel syndrome (CTS)**

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**Abstract:**

**Introduction:** Carpal tunnel syndrome (CTS) is the most common entrapment neuropathy in upper limbs**.** It is due to compression of the median nerve, as it passes beneath the transverse carpal ligament. Various risk factors are known for CTS-hypothyroidism, rheumatoid arthritis etc. Very little research work is available on the association of CTS with wrist to palm ratio and Body Mass Index (BMI).

**Methods**: For present study clinical examination and nerve conduction study was carried out to confirm the diagnosis of CTS. 60 patients and 60 age matched controls were studied. Wrist circumference and anteroposterior diameter (depth) at distal flexor wrist crease was measured .Palm length was measured from distal flexor wrist crease to the tip of the middle finger .Wrist palm ratio was calculated by dividing wrist depth by palm length. Body mass index was measured by using standard formula. All the parameters were compared with controls.

**Observations & Results** : In patients compared to controls BMI value, hand circumference and wrist to palm ratio values were significantly increased (P < 0.001).In patients compared to control palm length was significantly decreased (P < 0.001).

**Conclusion:** Increased BMI and increased wrist palm ratio is associated with increased prevalence of Carpal tunnel syndrome.

**Key words:** CTS (carpal tunnel syndrome), BMI (body mass index), wrist palm ratio, wrist circumference and anteroposterior diameter (depth).