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Carpal Tunnel Syndrome in Pregnancy: Conservative First, Surgery Rarely

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Introduction

Carpal tunnel syndrome (CTS) is the most common entrapment neuropathy, with a prevalence of 3–6% in the general population (1,2). During pregnancy, this prevalence increases substantially, reported between 19% and 34%, and may reach up to 63% in the third trimester (2–6). Despite its frequent occurrence, CTS in pregnancy is often underestimated, misdiagnosed, or managed with unnecessarily aggressive interventions. This editorial aims to draw attention to the unique course of CTS in pregnant women and to highlight the preference for conservative approaches over surgical options.

CTS in Pregnancy: More Common Than Perceived

Pregnancy induces a range of hormonal and hemodynamic changes, such as increased estrogen and progesterone levels. Additionally, fluid retention due to elevated renin–angiotensin–aldosterone activity leads to edema in synovial and subcutaneous tissues, resulting in increased intracarpal pressure and compression of the median nerve (6). Moreover, fluid redistribution during sleep may further exacerbate nocturnal symptoms.

Studies report CTS prevalence in pregnant women ranging from 19% to 34%, with some studies indicating rates as high as 63% in the third trimester (3-6). Common complaints include bilateral hand numbness, paresthesia, nocturnal pain, and weakness symptoms that may significantly impair daily functioning despite their often transient nature.

Diagnostic Challenges

Unlike the non-pregnant population, CTS diagnosis during pregnancy is mostly clinical. Phalen's and Tinel's signs are useful, though their sensitivity is variable. Although definitive, electrophysiological studies are often avoided during pregnancy due to patient discomfort and their limited utility in immediate management (7). Ultrasonography has emerged as a safe, non-invasive diagnostic aid by measuring the cross-sectional area of the median nerve (8).

Mehmet Subasi has played an active role in the Turkish orthopedic community, having served in executive positions within the Turkish Society of Orthopedics and Traumatology. He also served as the founding chairman of the executive board of the Pediatric Orthopedic Society. He has published 118 scientific articles in national and international journals, received approximately 2500 citations for his work, and contributed as a chapter author in medical textbooks. To date, he has participated as an invited speaker at 83 national and international conferences, sharing his professional knowledge and experience with wide audiences. He was awarded the Turkish Society of Orthopedics and Traumatology Scientific Award in 2007. He is a member of several prestigious professional organizations, including AO (Arbeitsgemeinschaft für Osteosynthesefragen), AAOS (American Academy of Orthopaedic Surgeons), TOTBID (Turkish Society of Orthopedics and Traumatology), and the Turkish Pediatric Orthopedic Society.

Conservative Management: The First-Line Approach

In the majority of pregnant patients, CTS resolves spontaneously after delivery (8). First-line management includes nocturnal wrist splinting, hand elevation, reduced salt intake, cautious use of topical NSAIDs, physical therapy modalities such as TENS, ultrasound, and stretching exercises. These methods offer significant symptom relief without systemic medication or procedural risk.

Role of Corticosteroid Injections

In cases where symptoms are moderate to severe, local corticosteroid injections into the carpal tunnel may provide rapid relief. Triamcinolone, for instance, has minimal systemic absorption. ACOG guidelines support such interventions during the second and third trimesters, but caution is advised during the first trimester due to potential fetal vulnerability (9).

When Is Surgery Justified?

Surgical decompression is rarely indicated during pregnancy. However, it should be considered when:

- There is progressive motor deficit,
- Thenar muscle atrophy is evident, or
- Symptoms are severely disabling and unresponsive to conservative methods.

In such cases, delaying surgery until postpartum may result in irreversible nerve damage. When

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surgical intervention is considered during pregnancy, a multidisciplinary approach involving obstetricians, neurologists, and orthopedic surgeons is essential (10).

Conclusion

CTS during pregnancy is common, yet often self-limited. Clinicians should be cautious not to overtreat this condition surgically. Conservative measures remain the mainstay of treatment, with steroid injections reserved for selected cases. Early recognition and patient education are key to minimizing unnecessary interventions and optimizing maternal comfort.

Clinicians are encouraged to recognize CTS as a common yet often self-limiting condition in pregnancy, and to tailor management strategies accordingly — reserving surgical intervention for only the most refractory and functionally debilitating cases.

Competing Interests

None declared.

Ethical Issues

Not applicable.

References

1. Subasi M, Ay S, Tuzuner T. Transection of the ulnar nerve as a complication of two-portal endoscopic carpal tunnel release. Isr Med Assoc J. 2004;6(7):443-444.
2. Atroshi I, Gummesson C, Johnsson R, et al. Prevalence of carpal tunnel syndrome in a general population. N Engl J Med. 1999;341:313–318.
3. Padua L, Caliandro P, D'Amico P, et al. Multiperspective study on carpal tunnel syndrome in pregnancy. PM R. 2013;5(9):786–792.
4. Atis G, Yuksel A, Yildiz Y, et al. Carpal tunnel syndrome symptoms during pregnancy. BMC Pregnancy Childbirth. 2015;15:124.
5. Kural D, Dogan S, Acar Z, et al. Carpal tunnel syndrome in third trimester: incidence and risk factors. J Obstet Gynaecol Res. 2019;45(6):1235–1241.
6. Khosrawi S, Maghrouri R. The prevalence and severity of carpal tunnel syndrome during pregnancy. Adv Biomed Res. 2012;1:43
7. Atzmon R, Eger G, Lindner D, et al. Carpal tunnel syndrome in pregnancy. Harefuah. 2014;153(11):663–686.
8. Tai TW, Wu CY, Su FC, et al. Ultrasonography for diagnosing carpal tunnel syndrome: A metaanalysis. Clin Orthop Relat Res. 2012;470(12):3340–3350.
9. ACOG Committee Opinion No. 475: antenatal corticosteroid therapy for fetal maturation. Obstet Gynecol. 2011;117(2 Pt 1):422–424.
10. Satteson ES, Li Z. Surgical treatment of carpal tunnel syndrome. Orthop Clin North Am. 2012;43(4):483–487