

It's All In The Wrist

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WRITER'S COMMENT: When I was assigned the case study essay for UWP 101F, I wanted to learn and write about something new to me. I was struggling to find someone to interview when I was reminded about my best friend's carpal tunnel syndrome (CTS), which she was diagnosed with as a teenager. I was incredibly hesitant, as I could not see how I would learn anything from such a common condition. After conducting some research, I realized how few articles are dedicated to adolescents with CTS. Even though I was supposed to write about someone I did not know, I took her offer and learned so much more than I could have imagined. From this paper, I gained a much deeper understanding about how a common adult ailment shaped the life of my best friend. This assignment allowed me to learn about the frustrations she faced while trying to convince physicians about early onset CTS. Her situation motivated me to tell her story and emphasize the importance of early prevention and treatment.

INSTRUCTOR'S COMMENT: In my Health Sciences Writing class, students spend the majority of the term writing for scientific audiences. At the end, though, they turn their attention to communicating with a lay audience in their case study. Most students find this immensely challenging, both because they're having to appeal to an audience different from themselves and because of the different techniques narratives demand. Caitlyn's essay is both emotional and informative. A condition many dismiss as an irritation to office and factory workers becomes a powerful force that changes a young woman's path in Caitlyn's capable, thoughtful hands.

—Karma Waltonen, University Writing Program

When pain shot up her right wrist and spread into her palm, with spidery legs extending into her fingers, she knew something was wrong. Cherise had joined her high school's tennis team as a freshman with the hopes of becoming a key player on the varsity team. She spent her entire sophomore year taking extra lessons and improving her tennis skills. Right before tryouts, she started feeling pain in her right wrist. With every swing, the pain would flare into her right palm and sometimes cause her to drop her racket. Her family has a history of carpal tunnel syndrome, but she shrugged the idea off. She was only sixteen, and no high schooler she knew had a health condition like that. She kept playing and eventually made it onto the varsity team. With a more rigorous training schedule, her wrist hurt more than ever, but she couldn't let her coach, team, or herself down. She had made it this far, but within a few months, her pain became so unbearable she couldn't hold her racket. At only sixteen, Cherise was diagnosed with carpal tunnel syndrome and was forced to reimagine her goals.

What Is Carpal Tunnel Syndrome:

Cherise didn't want to believe she had the same ailment as her parents, but she quickly understood she would have to accept it. In an article in *Pain Practice*, written by physicians in departments related to anesthesiology and pain management at various universities in the Netherlands and the United States, Jacob Patijn and colleagues describe carpal tunnel syndrome (CTS) as a "neurological disorder" that affects the functionality of the median nerve running through the carpal tunnel in the wrist (Patijn et al., 2011, p. 297). The carpal tunnel is a small space created between the wrist bones and a ligament. It guides muscle tendons and the median nerve through the wrist to provide the hand with sensation and muscular function. Since there is limited space, the median nerve can become compressed by the ligament on top or by the neighboring tissues and tendons (p. 298). One might experience pain, numbness, or tingling sensations in the forearm, wrist, hand, and fingers, specifically the inside of the thumbs, index, middle, and half of the ring fingers (pp. 297–298). This usually occurs in the dominant hand, but it can occur in both (p. 298).

Throughout her sophomore year, after completing school assignments or tennis practice, Cherise started to feel these symptoms. To alleviate the pain, she would constantly shake her wrist until the

discomfort subsided. This action is referred to as the “flick sign” by physicians Jennifer Wipperman and Kyle Goerl (2016) at the University of Kansas School of Medicine. It is the best indicator to identify CTS (p. 993). Without knowing this, Cherise remained in denial about having CTS and continued to shake her wrist constantly. Besides the flick sign, providers also measure wrist ratios and test patients for nerve compression, muscle weakness, and sensory loss to effectively diagnose patients with CTS (p. 995).

Diagnosis and treatment of CTS depends on the level of disruption of daily activities and sleep (Patijn et al., 2011, p. 300). Mild cases of CTS might disrupt tasks that require bending the wrist and hand (Wipperman & Goerl, 2016, p. 993). After writing a timed essay for her class, Cherise’s wrist would flare up and worsen throughout her day. Her fingers started to tingle and eventually became numb. This is common among mild cases because the median nerve’s sensory fibers are more likely to become compressed than the motor fibers. As CTS worsens, the motor fibers become impaired, affecting thumb functionality (p. 993). Cherise would lose her ability to grip objects, like a pencil or a tennis racket, making her school tasks and team drills impossible. During practice, she tried to ignore the symptoms, but she often had to ask to sit out to prevent further pain. She was the only one on her team with any wrist pain, so her coach didn’t understand why she couldn’t do the drills like everyone else, sometimes asking her, “Can’t you do it for your team?” Even though she had all the signs and symptoms of severe CTS, no one else her age had it. Cherise felt isolated.

Who Is Affected:

Cherise is among the few affected by CTS at such a young age. According to *MedlinePlus* (2020), a website organized by the United States National Library of Medicine, CTS usually starts in adults ages forty to sixty, affecting less than 5 percent of all adults. This condition is the most common form of nerve compression found in adults (Davis & Vedanarayanan, 2014, p. 59). CTS has a wide variety of causes, although it mainly stems from occupations requiring manual labor (p. 57). The frequent and repetitive use of vibrational tools and force can strain people’s wrists and worsen their symptoms (Wipperman & Goerl, 2016, p. 993). Having small wrists, inflamed ligaments, fluid buildup, obstructions, hormonal flare-ups, and increased stress to the wrist can

all further the development of CST. In addition, pre-existing conditions, like obesity, pregnancy, hypothyroidism, arthritis, and diabetes, can indirectly cause CTS (p. 993).

CTS is more common in adults, but it can still affect younger populations (MedlinePlus, 2020). Among children, CTS is rarer and stems from slightly different causes (Davis & Vedanarayanan, 2014, p. 57). Kids often get CTS from injury or pre-existing conditions, including diabetes, obesity, and nerve damage. Similar to Cherise, some kids also develop CTS symptoms after writing for school assignments (p. 58). CTS could also act as “part of a genetic syndrome,” but inheritance is uncommon (MedlinePlus, 2020). Cherise thinks her CTS was passed down because her parents and older sister all needed surgery in at least one wrist. Though this theory is highly probable, none of her family members experienced symptoms as early as she did.

Treatments and Beyond:

Depending on the severity of the CTS, providers offer different treatment plans. Mild CTS, characterized by few noticeable limitations, is usually treated with a splint, anti-inflammatories, or physical therapy (Patijn et al., 2011, p. 300). After Cherise had consistent symptoms for awhile, she visited her primary care physician at the end of her sophomore year. She explained how she couldn't hold her tennis racket from the amount of pain she felt. Despite this, she struggled to convince him she had CTS, due to her age. Although her symptoms directly pointed to CTS, he insisted she was “too young” because it “happens later in life.” Cherise was sent home with a brace and expectations to get better. Even though she had severe symptoms, Cherise's doctor hesitantly put her on what Patijn et al. (2011) describes as a “conservative management” treatment plan used for mild cases (p. 299). The treatment plan categories are intended to reduce the risk of taking unnecessary drastic measures that could potentially harm the patient. In Cherise's case, however, her provider dismissed her symptoms because of her age.

As she expected, her symptoms worsened. During her follow-up appointment, her primary care physician still did not diagnose her with CTS and instead referred her to sports medicine. Without a diagnosis and with another referral, Cherise was then sent to an orthopedic physician. He officially diagnosed her with CTS, but he was still hesitant to treat her as a severe CTS patient. She was given a corticosteroid injection and told to wait a month for the results. These injections are usually given when

the milder treatments do not work (Patijn et al., 2011, p. 299). This shot is intended to postpone “the need for surgery” because it is supposed to provide effective relief against the compressed nerve (Wipperman & Goerl, 2016, p. 997). Cherise’s pain, however, did not go away.

After this period of trial and error, Cherise finally received a referral to see the orthopedic surgeon who operated on her dad’s wrist. Cherise reviewed her symptoms, and he immediately scheduled her for the next surgery slot six months from then. Although she felt relieved to finally have acknowledgement of her CTS, she knew she would suffer with worsening symptoms for a little longer.

A year after her first appointment, Cherise got surgery. They told her surgery was the final option for CTS patients because of its high risk for permanent nerve damage. Typically referred to as “carpal tunnel decompression,” the procedure has a “70 to 90 percent” success rate and is reserved for those with “severe median nerve damage” (Wipperman & Goerl, 2016, p. 998). The website organized by the American Association of Neurological Surgeons explains how this surgery, either open or endoscopic, cuts the ligament over the carpal tunnel and relieves compression on the median nerve (AANS, 2021).

Like most patients, Cherise took about a month and a half to recover and returned to school that fall to complete senior year like a normal, healthy teenager. Within a few months, however, pain started to creep out of her wrist again. She took all the necessary precautions, but her symptoms mildly returned in the same place. According to the AANS, recurrent CTS happens in “less than five percent of patients” after surgery (AANS, 2021). Her returned symptoms could be from her delay in proper categorization and treatment. Since Cherise had severe CTS, she was at risk for not completely recovering after her surgery (Wipperman & Goerl, 2016, p. 995). Cherise knew there was not much she could do, so she continued to wear her brace and tried to live like others her age.

She reflects back and wishes the timing for everything had been different, but she has since accepted her fate of having CTS at a young age. Since high school, she had to change her lifestyle and daily habits to ensure she protects her wrist as much as possible. Instead of becoming a starter on the tennis team, Cherise became the “morale booster” and sat among the crowd during matches. As she watched her teammates play, her coach would yell, “it’s all in the wrist.” Cherise would agree but for a completely different reason.

References

- American Association of Neurological Surgeons (AANS). (2021, August 20). *Carpal Tunnel Syndrome—Symptoms, Causes, Diagnosis and Treatments*. www.aans.org/Patients/Neurosurgical-Conditions-and-Treatments/Carpal-Tunnel-Syndrome
- Davis, L., & Vedanarayanan, V. V. (2014). Carpal Tunnel Syndrome in Children.” *Pediatric Neurology*, *50*(1), 57–59. doi.org/10.1016/j.pediatrneurol.2013.08.019
- Lewis, C., Personal interview, Mar. 9, 2021.
- MedlinePlus. (2020, August 18) *Carpal Tunnel Syndrome*. medlineplus.gov/genetics/condition/carpal-tunnel-syndrome/
- Patijn, J., Vallejo, R., Janssen, M., Huygen, F., Lataster, A., van Kleef, M., & Mekhail, N. (2011). Carpal Tunnel Syndrome. *PAIN Practice*, *11*(3), 297–301. doi.org/10.1111/j.1533-2500.2011.00457.x
- Wipperman, J, & Goerl, K. (2016). Carpal Tunnel Syndrome: Diagnosis and Management. *American Family Physician*, *94*(12), 993–999. www.aafp.org/afp/2016/1215/p993.pdf