

Dr. Julie's Myofascial Pain Syndrome

Julie graduated from dental school, cum laude in 1994. After 8 years of continuous study she accumulated a hefty student loan. Julie was ready to take charge of her life. No associateship for Julie. She bit the proverbial bullet and purchased Dr. Olden's 1960's state of the art dental office, a retiring GP's. For three years Julie put her nose to the grindstone from 7:00 to 7:00, Monday through Friday. Plus alternate Saturday's.

Julie's productivity was impressive. Her efforts paid off. Her finances were in good shape. So in 1997 she rewarded herself by taking Friday's off. To cram her prior five day work week into four days, she decreed a new office rule - No Breaks! Office staff scheduled patients consecutively, regardless of the complexity or length of the dental procedure.

The Problem

Dr. Julie seemed capable of maintaining her high volume dental practice. She never complained to her spouse or staff, however Julie noticed a deep, dull, aching pain in her neck and shoulders, similar to a toothache. She reported these symptoms in January 2004.. She said they started around 2 years prior. She ignored them until they effected her productivity.

At our first appointment Julie completed a medical history. I carried out a comprehensive physical exam. Dr. Julie admitted that she sat for hours at a time, holding awkward positions, with her arms elevated in a compromised position. She had 20/20 vision so she only wore safety glasses. Her overhead lighting was 1960's vintage.

The Diagnosis

The examination revealed Julie had bilateral shoulder elevation. She held her head tilted slightly to the right and had moderate restriction of neck motion.

Julie's symptoms and findings were consistent with overuse of muscles due to postural strain. I reproduced Julie's pain with manual palpation of her upper trapezoid muscles and her levator scapulae. She had taut bands of muscle with trigger points (TrP) and the characteristic referral patterns of these muscles to the neck, shoulder and between the shoulder blades.

My initial diagnosis was myofascial pain syndrome associated with postural strain.

Myofascial pain syndrome is usually caused by an injury of some type, although repeated muscular contraction, postural imbalance and stresses result in the syndrome. Since the injury is to muscle, initial treatment is conservative. It is directed towards reconditioning of the muscle through trigger point therapy, spinal adjusting techniques, stretching and strengthening exercises and postural reeducation.

The Treatment

I recommended a therapeutic regime of 3 treatments per week for 3 weeks. Julie's treatment consisted of trigger point therapy. Using my thumb I applied sustained pressure directly on the TrP to create tolerable pain. As the discomfort abated I gently and gradually increased pressure. Julie's treatment also included stretching, heat, spinal adjusting and home stretching and strengthening exercises.

After 3 weeks of treatment Julie reported that her neck and shoulder pain had improved significantly. I continued to treat Julie and gradually increased the intervals between visits. Then Julie completed the following assessment.

Julie's Mini- self assessment results:

Do you have the following risk factors?

- prolonged awkward postures
- repetitive movements
- poor equipment
- lack of magnification
- improper adjustment of equipment
- infrequent breaks
- poor flexibility
- improper positioning of operator or patient
- weak postural muscles
- stress.

Do you experience pain in?

- neck
- lower back
- shoulder
- hand
- wrist
- hip
- knee
- foot

Julie opted for a preventative approach. She completed an in-office ergonomic assessment. First we videotaped and assessed the operatory layout, operator and assistant chairs, instruments and controls. We recommended strategies to avoid prolonged, static muscle contractions, to reduce work related injuries, including chair side stretching.

I observed Julie at work. Julie sat for 95% of dental procedures. Julie positioned the patient too high and not directly under her neutral working zone. Her stool position was a correct vertical height however it locked so that it would not swivel. She worked with her arms elevated, they were not held in a proper neutral position. Her head, neck and upper spine twisted to the right in the direction of her patient.

I recommended the following changes:

1. Lower the patients vertical height which would lower her own shoulder elevation
2. Maintain a 90 degree angle at the elbows.
3. Swivel the patient chair so that the patient is under her working zone.
4. Swivel Julie's stool to allow more maneuverability.
5. Use a custom made dental loop for magnification.
6. Install over head track lightening.
7. Alternate scheduling of patient procedures. e.g. full examination, restorative procedure, stretch break, crown prep, stretch break, recall, lunch, restorative procedure, child recall, stretch break restorative, adult exam
8. Schedule breaks in day sheet.

9. Schedule neck, upper back and arm stretches once an hour.

Most dentists like Julie benefit from some or all of these chiropractic and ergonomic modalities. Julie has made stretching a routine practice during her work day. She takes mini-breaks throughout the day to simply get up and move her body. Just as Julie's patients come in for their regular cleaning and check-up, Julie comes in monthly for her chiropractic tune-up!

About the Author

Dr. Vanessa Arnold is a graduate of York University and the Canadian Memorial Chiropractic College. Founder of Ergodontics, which provides unique in-office ergonomic assessments to Dental professionals and clinic director of Body In Balance Chiropractic and Pilates Studio. Dr. Arnold specializes in the treatment of musculoskeletal complaints, repetitive strain injuries, back, neck, arm, hand pain and work related dental injuries.