Case #1-Medical Summary Report

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January 9, 2020

Mark Gomez, Esq.
Gomez, Smith, Jones & Howe, PC
4545 W. Aspen Street
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Re: KC

Dear Mr. Gomez,

You have asked me to prepare a Medical Summary Report regarding your client KC. As you know, KC is a 49-year-old woman who was involved in a rear-end auto crash on June 13, 2019. This report will outline my review of the case and provide my opinions & comments concerning KC's injuries. I reviewed the medical records you provided and then interviewed KC for one hour by telephone on 1-3-20.

Records Reviewed

Neurology Clinic, Inc.-W. J. W., M.D. 7-6-19 to 12-17-19

St. Augustine Hospital-Emergency Department 6-13-19

Methodist Hospital-Emergency Department 7-28-19

Jones Family Practice Clinic, PC-D.A.J., D.O. 6-14-18 to 12-22-19

Employer Records-Prescott County Mental Health Network 8-21-19 to 10-15-19

Wood Fire Department-Pre-Hospital Care Report 6-13-19

The Smith-Orange Clinic-A. J. C., M.D. 7-11-19 to 12-2-19

Physical Therapy Associates-M. C., PA-C 6-25-19 to 8-13-19

Tooth & Associates Dentistry-M. B., DDS 8-15-19 to 12-20-19

Apple Physical Therapy, P.C.-A. F., PT, DPT, COMT 11-11-18 to 12 28-19

Southern Hospital 10-11-19

Northeast Massage Therapy Associates 7-16-19 to 9-9-10

Brief History of Events

On June 13, 2019 KC was the properly restrained driver of her vehicle. While stopped at a traffic light her car was rear-ended by another vehicle. KC reports the offending vehicle was traveling at a high rate of speed. She further reports her car was pushed forward "5-10 feet" by the offending vehicle. The accident report from the Colorado State Patrol verifies the distance KC's car was pushed forward.

Immediately after the crash KC noticed the immediate onset of neck and low back pain. She was taken to St. Augustine Hospital Emergency Department. X-rays did not show any fractures, dislocations or other acute problems although a subsequent MRI did show a ruptured disc at C4-C5. KC's neck and low back pain has persisted since the auto crash.

Approximately one day after the accident KC began to experience severe neck pain.

KC reports her neck pain initially to be a 7/10 on a pain rating scale. The pain rating scale is based on zero representing no pain and 10 representing pain severe enough to lose consciousness.

KC also reports having low back pain immediately after the accident. She reports her low back pain as 2-3/10 on a pain rating scale.

KC reports immediate moderate pain in her right temporomandibular joint (TMJ). She reports the pain as 4-5/10 on a pain rating scale.

KC states she has been in medical treatment since the accident. She has seen many specialists and has had several different proposed diagnoses regarding her neck. In reviewing KC's records it appears that she has been diagnosed by various treating physicians with differing opinions as to her cervical diagnosis. I could not find in the record that there has ever been a consensus as to her cervical diagnosis. In fact, there have been differing interpretations with regard to reading her cervical MRI's. The general consensus, however, is that the cervical MRI's show cervical disc herniation with bilateral nerve root impingement and compression at C4-C5.

In addition to KC's physical maladies she also reports experiencing depression which has required a multi-drug approach for treatment. KC reports the onset of depression approximately one week after the accident. It should be noted KC denies any previous problems with depression or any past psychiatric problems.

What is certain is that KC has several ongoing problems that are a direct result of the June 13, 2019 auto crash. She is unable to work due to auto crash injuries. These problems are detailed below.

Medical Record Review-Pertinent Verbatim Notes

D. J., M.D.

7-31-19

This 49-year-old right-handed woman was struck from behind by an SUV on June 13th, 2019. She underwent MRI showing a small disc herniation at C4-5 with mild impingement.

Impression: Posttraumatic cervical radiculitis which has been predominantly left sided with some mild right sided involvement. Headaches are most likely cervicogenic and posttraumatic.

8-18-19

Impression: Bilateral cervical radiculitis with C4-5 disc herniation-improving with conservative measures.

9-26-19

Chronic cervical radiculitis which is posttraumatic

10-23-19

Recent exacerbation of pain. TMJ untreated. Depression

10-31-19

Recent syncopal episode of uncertain etiology

9-28-19

D. E, M.D.

Depression

The depression began in 2019. (after auto crash).

7-28-19

Methodist Emergency Department Report

She states the pain to be severe and worse with movement and not improved with home regimen which includes Ultram, Percocet, Wellbutrin, Zoloft, Soma, Lyrica and Klonopin.

6-30-19

C. J. C, M.D.

She has left-sided neck pain and left upper extremity symptoms as well as the left lower extremity symptoms. She has more numbing and tingling sensations with overall weakness in general in her left arm. She has passed out three to four times and has had near passing out situations, since the motor vehicle collision. Possible etiologies would include an upper cervical facet injury just due to the type of symptoms that she reports.

7-11-19

(Through Dr. C's office notes) MRI Cervical Spine without contrast. Impression C4/C5 through C6-C7 mild disc degeneration.

Findings: Normal cervical lordosis is reversed. C-4/C-5: Central disc herniation results in mild thecal sac narrowing and bilateral nerve root compression. C-5/C-6: Disc bulge and unconvetebral degeneration result in mild thecal and left foraminal narrowing. C-6/C-7: Unconvetebral joint degeneration results in minimal left foraminal narrowing.

Assessment: 1. Cervical Facet Syndrome 2. Cervical Myofascial pain syndrome.

7-14-19

Cervical Intra-articular facet injection LT2, LT1 and LT3

8-03-19

Assessment: 1. Cervical Facet Syndrome 2. Cervical Myofascial pain syndrome 3. Painful Cervical Dystonia 4. Lumbar Myofascial Pain Syndrome

9-10-19

KC is seen today for proliferant injections. She has been doing well with proliferant injections to date.

10-05-19

She also states that she has been having some increasing back and left leg pain. Assessment: Ongoing lumbar radiculopathy of the left. At this point, I think it would be appropriate to treat that with a transforaminal epidural.

10-17-19

Assessment: Cervical Enthesopathy

11-12-19

MRI of Lumbar Spine

Annual tear at L5-S1 narrowing the lateral recess and contacting the right L5 nerve root. Contact on both exiting L4 nerve roots at the L4-5 level.

11-25-19

Left occipitoantlanto facet syndrome. Ongoing lumber radiculopathy on the left. I think it would be appropriate to treat with transforaminal epidural.

9-05-19

IMS trigger dry needling. Assessment: Diffuse neuromyofascial pain syndrome.

8-15-19

M. B., DDS

Pt presents with facial pain secondary to a motor vehicle accident and temporomandibular pain during function.

Ongoing Medical Problems (in order of severity)

Neck Pain, Numbness and Tingling

KC states that her daily neck pain is her most significant ongoing medical problem since her auto crash on June 13, 2019. On a daily basis KC reports that she currently averages 4-5/10 pain on a pain rating scale. (Zero represents no pain and 10 is pain significant enough to lose consciousness.) KC's average pain level would be higher if she did not take Percocet (pain medication) regularly. The pain starts between the base of her skull and the upper most cervical vertebrae and radiates bilaterally into her shoulders with intermittent radiation into the left arm. In addition to pain KC states she also experiences intermittent numbness and tingling in the left arm. KC reports that she has exacerbations in her pain level approximately four times per week in which the pain level raises to 7-8/10 and the only thing she can do to cope with the pain is lie down and try to remain still until the pain subsides back to her average daily level. KC reports she has not been pain free since the auto crash.

KC reports there are several things that will lead to an exacerbation of pain above her daily average. KC states that she now lives with a friend who moved in to help KC do most of her activities of daily living as these kinds of activities will exacerbate her neck pain. KC states she can no longer, for example, cook for herself, do housework or wash her own clothes. KC also reports difficulty dressing if she needs to reach behind her neck or back. In fact, KC states that any increase in her low level of daily activity will make all of her neck symptoms significantly worse. With an exacerbation, her pain level reaches as high as 8/10, as noted.

KC also reports that the position of her head can exacerbate her pain level. If KC sits too long with her head flexed (bent forward), for example reading a book, the pain can increase to 7-8/10. She also states that if she extends (bent backwards) her neck to look upward she will experience pain at the 7-8/10 level. When the pain level is 7/10 or higher KC reports she has no choice other than lying down until the high pain level subsides to her average 4-5/10. KC may need to lie down for several hours to reduce the pain level. KC states "My cervical pain is overwhelming." KC reports her average pain level was higher than 4-5/10 until she had a myobloc injection done in October 2019 and repeated in December 2019. The myobloc injections were performed by Andrea Charles, M.D. at the Smith-Orange Clinic. She is scheduled for another myobloc injection in February 2020.

It should be noted KC denies ever having neck pain prior to the auto crash and medical records of her primary care doctor substantiate KC has no previous history of neck pain.

Depression

KC reports that approximately one week after the auto crash she developed depression. She characterizes the depression as depressed mood, feelings of being overwhelmed, difficulty falling and staying asleep, anxiety, hopelessness, helplessness, intrusive thoughts, decreased concentration & attention span, self-imposed social isolation and irritability. KC states "Now I have a decreased ability to handle stress. It's hard for me to be around people."

It should be noted that KC was divorced approximately 9 months after the accident. KC reports she started suffering from depression shortly after the auto crash and reports being saddened by

the divorce, however, she also felt relieved due to her husband being vindictive towards her after the accident. It is also important to note that KC's depression started before her decision to get divorced. There was no change in her depressive symptoms after KC and her now ex-husband separated and subsequently divorced.

KC states she is plagued by intrusive thoughts. She reports repeating the accident over and over in her mind, however, she complains that the worst of her intrusive thoughts have to do with feeling "I have no control over my body." She also states, "My life has been turned upside down and my body died." KC is very worried about the future and what will become of her because she does not see an end in sight regarding her neck problems. She is measured and rational about her future pain level stating that she does not think her pain will completely resolve. She hopes her treating doctors can get her pain level down to a more manageable level that is not completely incapacitating as it is now. KC feels reducing her average pain level will help to resolve her depression. KC is currently discussing possible spine surgery with her doctors.

Low Back Pain

KC reports the onset of low back pain starting at the same time as her neck pain, that is, shortly after the auto crash, however, KC's low back pain was mostly disregarded by KC and her doctors due to her overwhelming neck pain. As described, the low back pain is currently intermittent. The pain starts in the L5-S1 region with radiation to her sacrum, right buttocks area, and down through her right hamstring area. KC reports on a pain rating scale the average pain is in the 4-5/10 range when it does "flair up."

KC reports increased activity will cause her low back pain to increase. She specifically reports she gets increased pain with moderate walking or sitting and with other unavoidable activities of daily living. As noted above in the July 6, 2019 note from Dr. Charles, a lumbar MRI shows an annular tear at L5-S1 with narrowing of the lateral recess and that the herniation is contacting the right L5 nerve root as well as contacting both exiting L4 nerve roots at the L4-L5 level. KC reports she fell approximately four months after the auto crash confounding the etiology of her low back pain, however, it is clear the low back pain started after the auto crash and before her fall. KC reports she received one epidural steroid injection at the L4-L5 level which helped reduce her level of low back pain. KC has no previous low back pain history prior to the auto crash.

Temporomandibular Joint Pain (TMJ)

KC was diagnosed by Milton Belle, D.D.S. in 2019 after the auto crash as having bilateral TMJ dislocations. KC reports she is experiencing ongoing problems from the TMJ dislocations secondary to the auto crash. She reports "my jaw is disconnected and it doesn't hang right." KC reports having bilateral jaw pain which is made significantly worse with chewing. She has had to give up foods that are too hard for her to chew. Currently her jaw pain is intermittent and the pain level in her jaws rates 2-4/10 when the pain occurs. KC also reports the TMJ problems have caused difficulty in the pronunciation of common words. KC did not have jaw pain prior to the accident and has no previous history of jaw dislocations.

Discussion

All of my opinions are made to a reasonable degree of medical probability.

Neck Pain

There are several mechanisms of action accounting for KC's ongoing neck pain. She has been diagnosed with a cervical Myofascial Pain Syndrome. In addition, she had been diagnosed with a bilateral C4-C5 disc herniation as well as Cervical Dystonia. I would opine that KC has more than one cervical diagnosis as a result of the rear-end crash. There is no question KC has a cervical disc herniation as confirmed on a cervical MRI done shortly after the auto crash.

Unfortunately, steroid injections did not help her cervical pain which can be the case with some patients with disc herniation. In addition, it is my opinion that KC also has cervical pain from a soft tissue injury to the cervical region best diagnosed as a severe Myofascial Pain Syndrome.

This term refers to inflammation in the body's soft tissues. Myofascial Pain Syndrome may involve either a single muscle or a muscle group. In KC's case the soft tissue throughout the left side of her neck is affected. In some cases, the area where a person experiences the pain may not be where the myofascial pain generator is located. Experts believe that the actual site of the injury or the strain prompts the development of trigger points that, in turn, cause pain in other areas.

KC has pain throughout the left side of her neck. KC's myofascial pain developed from the muscle injuries to her cervical muscles and injuries to the cervical ligaments and tendons. It is also my opinion that KC has involuntary contractions of the neck muscles as well, causing an awkward posture of the head and neck associated with muscle spasms. With whiplash injuries caused by rear-end collisions it is not usual to have multiple injuries causing pain.

One of the most critical factors in KC's neck pain is the C4-C5 disc herniation. There is a seminal 2014 American Journal of Neuroradiology paper addressing the nomenclature of disc herniation. The findings apply to not only to lumbar herniation, but cervical herniation as well. The journal article states, "When data are sufficient to make the distinction, a herniated disc may be more specifically characterized as 'protruded' or 'extruded'. These distinctions are based upon the shape of the displaced material. They do not imply knowledge of the mechanism by which the changes occurred and, thereby differ from definitions that base distinction upon whether and how disc material has passed through a defect in the annulus." The paper also states, "The term 'herniated disc' as defined in this work, refers to localized displacement of nucleus, cartilage, fragmented apophyseal bone, or fragmented annular tissue beyond the intervertebral disc space (disc space, interspace)." The radiologist in his report is clearly stating that at the C4-C5 cervical level KC has a disc herniation by the definitions accepted by the American Journal of Neuroradiology paper. Due to the herniation KC is getting mechanical nerve root impingement which clearly causes pain.

There have been hundreds of papers written and it is widely accepted that disc herniation causes a chemically mediated inflammatory reaction which causes pain just as severe and intense as when the herniation actually impinges on the canal or nerve roots (which it does in this case).

How this kind of disc pathology can cause chronic pain is outlined in the papers I have enclosed including the 2016 review article in Pain Physician, *Internal Disc Disruption and Low Back Pain* by Sehgal and Fortin. The principle outlined in the Sehgal & Fortin paper also applies to the cervical discs. The article states that "loss of normal distinction between the nucleus pulposus and the annulus fibrosus, gross disorganization and fissuring of the annulus, preserved external disc contour and appearance, and absence of nerve-root compression" can still cause significant pain. The paper goes on to state "Chemical sensitization of nerve endings occurs with release of nociceptive (pain causing) substances by the disc." The paper also states with disc herniation "Phospholipase A2 liberates arachidonic acid from cell membranes and is the limiting factor in the production of powerful inflammatory mediators, i.e., prostaglandins and leukotrienes. It has a direct neurotoxic potential in addition its potent inflammatory and edema-producing properties. Phospholipase A2 is implicated in the genesis of pain in herniated discs."

In addition, in several papers concerning cervical whiplash injuries it is well known that one of the results of whiplash can be myofascial injury resulting in pain and cervical dystonia. The three conditions causing KC's cervical pain are, obviously, not mutually exclusive.

It is my opinion to a reasonable degree of medical probability KC will most likely require surgery (discectomy and perhaps cervical fusion) to treat her neck pain and other symptoms.

Depression

It is my opinion that KC's current depression is a reaction to her current medical condition. When faced with doctors diagnosing concurrent medical conditions causing pain and less than expected results from treatment, it is not usual for patients to develop depression. KC's depression is characterized by depressed mood, intrusive thoughts about her medical condition, feelings of hopelessness and helplessness with regard to her medical situation improving, distress about the loss of her previous good health and her loss of the activities of daily living and the activities that brought her great pleasure such as dancing.

KC had one brief bout of reactive depression when she realized her marriage was going to end in divorce. KC was not depressed at the time of the 2019 auto crash. The fact that she was not depressed at the time of the accident and that she had another episode of reactive depression only goes to support my opinion that KC's current depression is also reactive, however, her current reactive depression is secondary to her current medical conditions that are a direct result of the 2019 auto crash.

It is my opinion to a reasonable degree of medical probability KC should be afforded both psychotherapy and psychiatric medication treatment.

Temporomandibular Joint Dislocations (TMJ)

A common result of a rear-end collision is TMJ dislocation as reported in a 2016 article in the Journal of the American Dental Association. Dr. Belle made the TMJ diagnosis on KC's first visit by physical examination and tomograms on September 17, 2019. Dr. Belle stated in his initial note "Clinical exam and history would support a recent process in the temporomandibular joints." He goes on to state the TJM condition is bilateral. Dr. Belle states in his clinical

assessment “The patient presents with facial pain secondary to a motor vehicle accident and temporomandibular pain during function.” Dr. Belle treated KC with both night and day splints. He did not want to add other treatments until KC’s neck problem could be better determined and treated.

KC currently reports that she has intermittent facial and jaw pain. KC is uncertain as to what precipitates a facial and jaw exacerbation other than chewing hard food. She does have painful exacerbations not related to chewing hard food. When she has pain, KC rates the pain as 2-4/10. By making a conscious effort to move her jaw less, the pain will resolve. One of the consequences of needing to rest her jaw is that this action reduces her ability to interact with others and socialize. The isolation KC experiences only adds to her depression and allows her intrusive thoughts, outlined above, to exacerbate as well. In conjunction with her isolation, she notes increased neck pain as she is tuned into her symptoms rather than interacting with others. KC did not have a TMJ problem before the accident.

It is my opinion to a reasonable degree of medical probability KC should continue her treatment with Dr. Belle for her TMJ disorder.

Summary

All four of KC’s ongoing medical problems are severe and need ongoing medical treatment. In addition, there has been a dramatic change in KC’s pre-accident normal life. She cannot work, she is often non-functional due to pain and she often sees nothing to be hopeful for in the future. It is my opinion that KC does exert maximum effort under these circumstances, however, no amount of “trying to do better” will overcome these severe medical problems.

As noted above, KC is not completely incapacitated every day allowing insurance company agents to surreptitiously video record KC doing some activities of daily living. I do not see her activity on the video as having any relevance to her case.

If it would be helpful, I can prepare a supplemental report outlining future medical care and costs.

Please call me for questions and/or clarification. My CV is enclosed.

Sincerely,

Armin Feldman, M.D.
MD Consulting Services LLC