Migraine and Upper Cervical Care

A Systemic Investigation

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Introduction

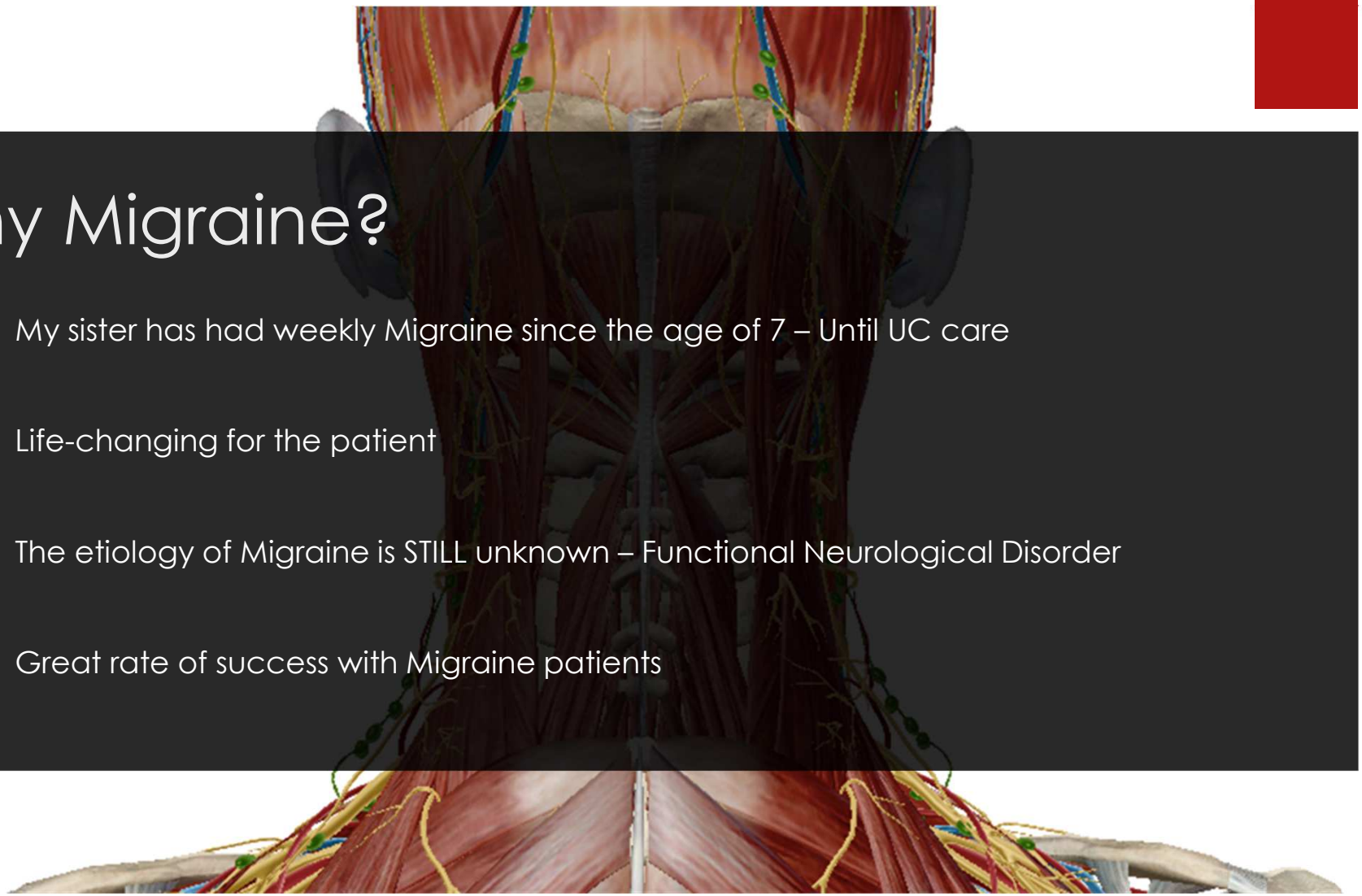
- Education: Bachelor's in Bio and Doctor of Chiropractic from Life University
- Continuing Education: Mastering Migraine , Diplomate in Cranio-Cervical Junction Procedures (DCCJP)
- Clinical Setting: Private Practice (5 Years)
- Specialty: Upper Cervical Care
- Special Interest: Migraine and Facial Pain patients

Objectives

- To gain a better understanding on the topic of Migraine
- To analyze a collection of data using the MIDAS form from patients with Migraine and their response to Upper Cervical Care
- To provide an individualized alternate solution to Migraine sufferers aside from medication and Botox
- Address the issue with the current traditional medicine model - Same story, different patient

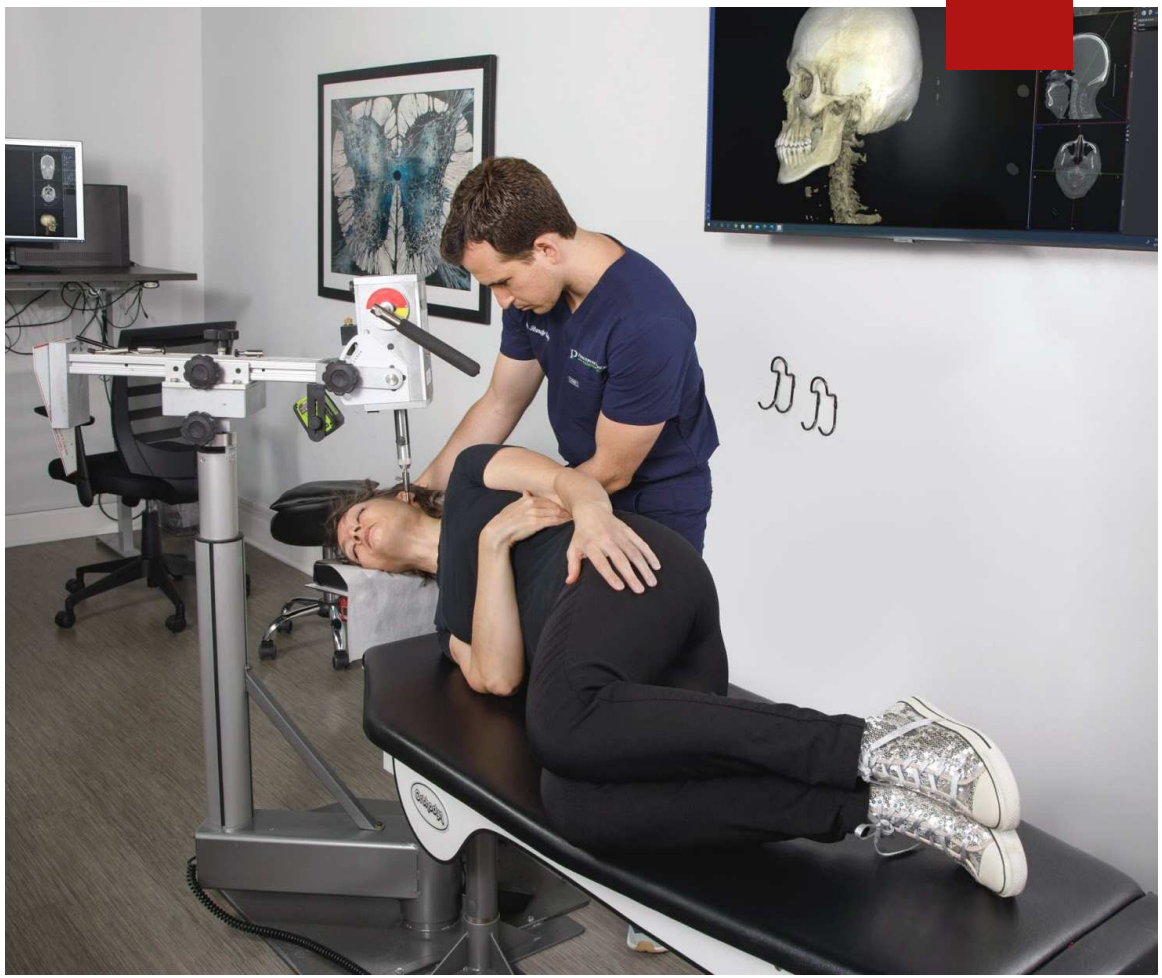
Why Migraine?

- My sister has had weekly Migraine since the age of 7 – Until UC care
- Life-changing for the patient
- The etiology of Migraine is STILL unknown – Functional Neurological Disorder
- Great rate of success with Migraine patients



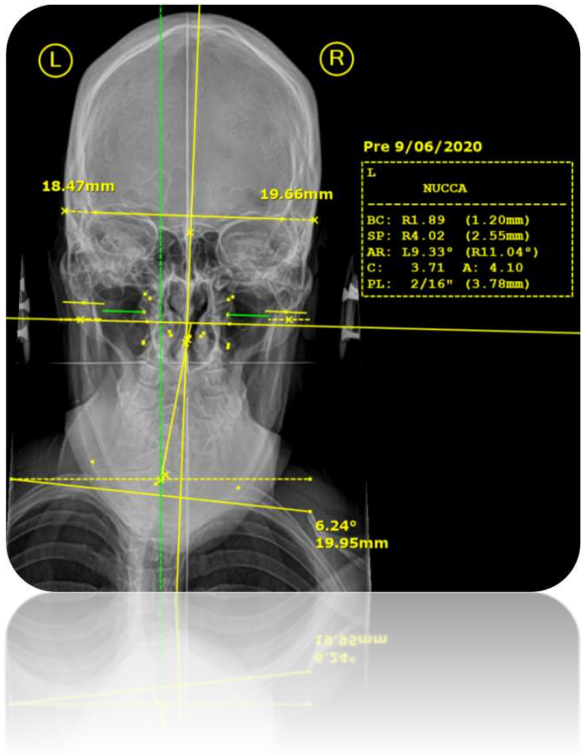
Treatment Approach

- Analysis for the study - Orthogonal Based; NUCCA and Orthospinology - 2D X-ray
- Orthospinology Table Mounted Adjustment (C1) and KH2 (C2)
- SIGMA Instrument Adjusting using PRS protocols (Mid C's)
- Manual Soft Tissue Release of the Neck



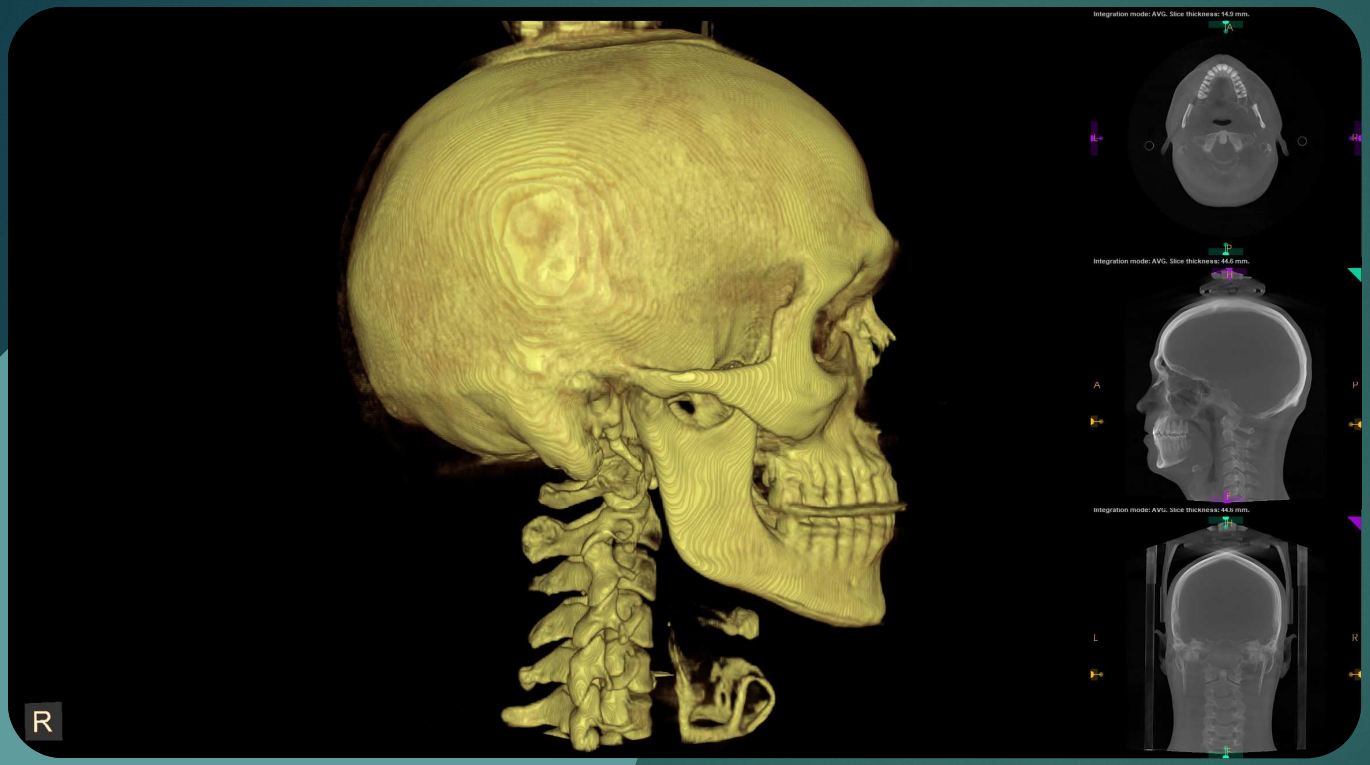
Treatment Protocol

- Orthospinology requires films prior to any treatment and post films as well
- Standard Examination – Thermography scans, scanning palpation of the neck (scaled 0-3),ROM (Digital Goniometer), supine leg measurement, hip caliper measurement and overall posture evaluation
- Additional examination for Migraine patients – Pupillary Light Reflex, Bilateral BP (After this study)
- The X-rays and working examination determine the factors of adjustment as well as the need for an adjustment



Limitations (At the time of the study)

- 2D Image Distortion
- Unable to see the soft tissue damage/adhesions on imaging (Such as MRI)
- Unable to view the potential fluid flow disruptions
- Excursion adjustment to C1 - Contact
- Unable to prescribe hormones if necessary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Migraine Statistics

The American Migraine Foundation estimates that at least 39 million Americans live with migraine

Migraine is best described as a neuronal event that may be caused by a hereditary susceptibility of the brain and various environmental triggers. It may occur in patients who have a genetically sensitive nervous system. The pathophysiology of migraine continues to be studied, and numerous theories have been proposed.

Women have migraines three times more often than men

Most people start having migraine headaches between ages 10 and 40. But many women find that their migraines get better or go away after age 50

Genetic Predisposition - Four out of five people with migraines have other family members who get them. If one parent has a history of these types of headaches, their child has a 50% chance of getting them. If both parents have them, the risk jumps to 75%

Patient(s) Presentation

- 13 consecutive adult patients with a Primary complaint of Migraine. 10 out of 13 completed the study (77%)
- Gender Sample: 9 Female, 1 Male
- Ages: 26-45 years old with an average age of ~31
- All patients had Chronic Migraine (> 3months in duration)
- 8 out of 10 (80%) had a known family history of Migraine

Patient(s) Presentation Cont.

- 9 out of 10 (90%) had been to a neurologist prior to seeing me
- 4 out of 10 (40%) had been to urgent care
- 10 out of 10 (100%) only unilateral pain during an episode.
- All participants described their Migraine in a similar pattern. Begin in the neck, pressure at the base of the skull and “wrap around” behind the eye.

Prior Treatment – Most Common

Preventative Medications (Aimovig, Emgality)

Abortive Medications (Triptans such as Imitrex)

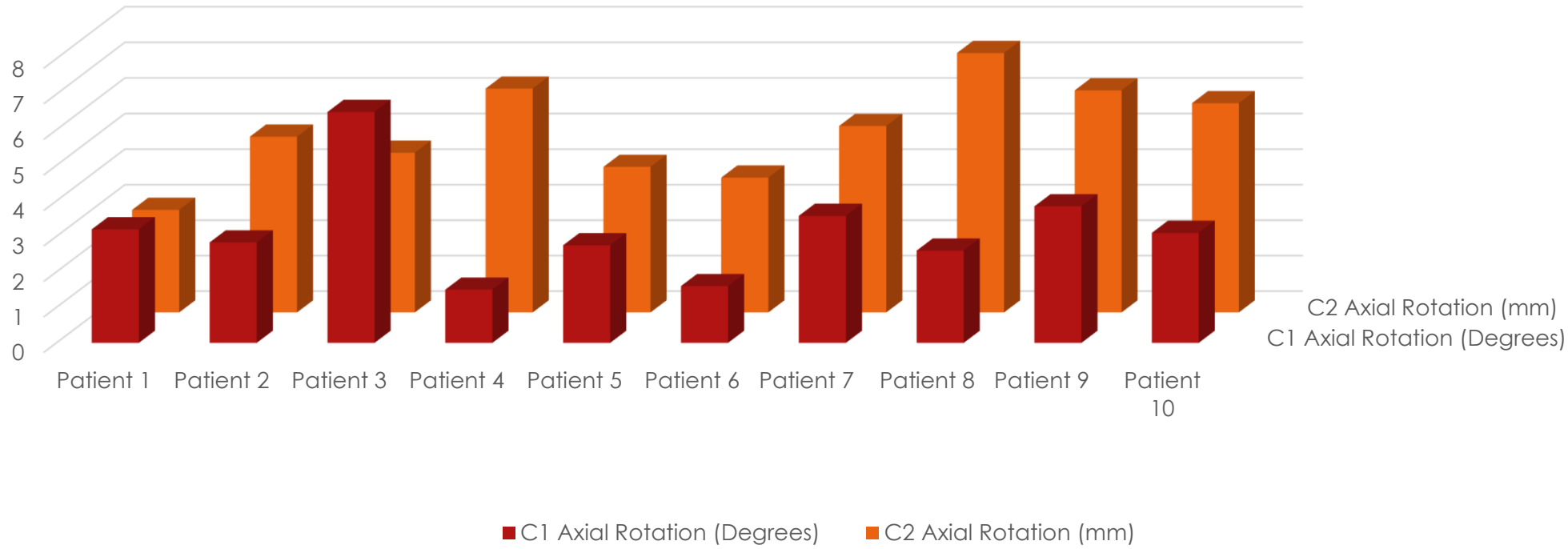
Botox Injections

Nothing More We Can Do For You

Patient Evaluation

- All participants revealed a Supine LLI and inflammation on the C2 nerve root upon palpation
- C1 and C2 Axial misalignments were measured and recorded. With an average of ~3.15 C1 Axial Rotation and ~5.12 C2 Axial Rotation
- Each participants were required to fill out a Migraine Disability Assessment test prior to starting treatment (pre form)

C1 & C2 Axial Rotation



Migraine Disability Assessment Test (MIDAS)

Migraine Disability Assessment Test
(Simple English)

	Month 1	Month 2	Month 3
1. How many days did you miss work or school because of a headache?			
2. How many days did you go to school or work but only did less than half of your schoolwork or less than half the work you do at your job because of a headache?			
3. How many days did you not do any household chores at all because of a headache? (chores include: cleaning, shopping, watching your children, running errands etc.)			
4. How many days did you do household chores but could only do about half or less as usual because of a headache?			
5. On how many days did you miss doing things with friends and family or doing other fun things because of a headache? (such as: birthdays, parties, fishing, bowling etc.)			
Score ← **3 Month total =**	Month 1 Total days	Month 2 Total days	Month 3 Total days

Grade	Definition	Score
I	Little or no problems doing most things Little or no disability	0-5
II	A little bit of a problem doing things Mild disability	6-10
III	It is a problem doing a lot of things Moderate disability	11-20
IV	Can do very little or nothing at all Severe disability	21+

How many days each month did you have a headache? (If a headache starts on one day and lasts to the next count both days.) Not scored.

Month 1	Month 2	Month 3	Total

Adapted from the *Migraine Disability Assessment (MIDAS)* Questionnaire developed by Richard B. Lipton, MD, Professor of Neurology, Albert Einstein College of Medicine, New York, NY, and Walter F. Stewart, MPH, PhD, Associate Professor of Epidemiology, Johns Hopkins University, Baltimore, MD.

MIDAS

The Migraine Disability Assessment (MIDAS) questionnaire is a brief, self-administered questionnaire designed to quantify headache-related disability over a 3 month period.

The MIDAS score has been shown to have moderately high test-retest reliability in headache sufferers and is correlated with clinical judgment regarding the need for medical care.

Patient Care

All patient's were diagnosed with Migraine based on the following criteria (IHS Classification):

- Recurrent headache manifesting in attacks lasting 4-72 hours
- Unilateral location
- Pulsating quality
- Moderate or Severe Pain Intensity
- Aggravation by or causing avoidance of physical activity
- During the headache at least one of the following:
  - Nausea and/or vomiting
  - Photophobia and phonophobia

Treatment Protocol

- C1 and/or C2 adjustments were performed when indicators showed
  - Utilizing the Orthospinology instruments; table-mounted (C1) or KH2 handheld (C2)

- When the patient was in their holding pattern, one of the two following treatments were performed:
  - 1) C5-T1 percussive adjustment utilizing the SIGMA pro-adjusting instrument
  - 2) Manual soft-tissue release of the muscles attaching to the Cervical spine

- Progesterone cream was prescribed to 3 patient's based on the timing of their Migraine

- Nutrition was discussed with every patient

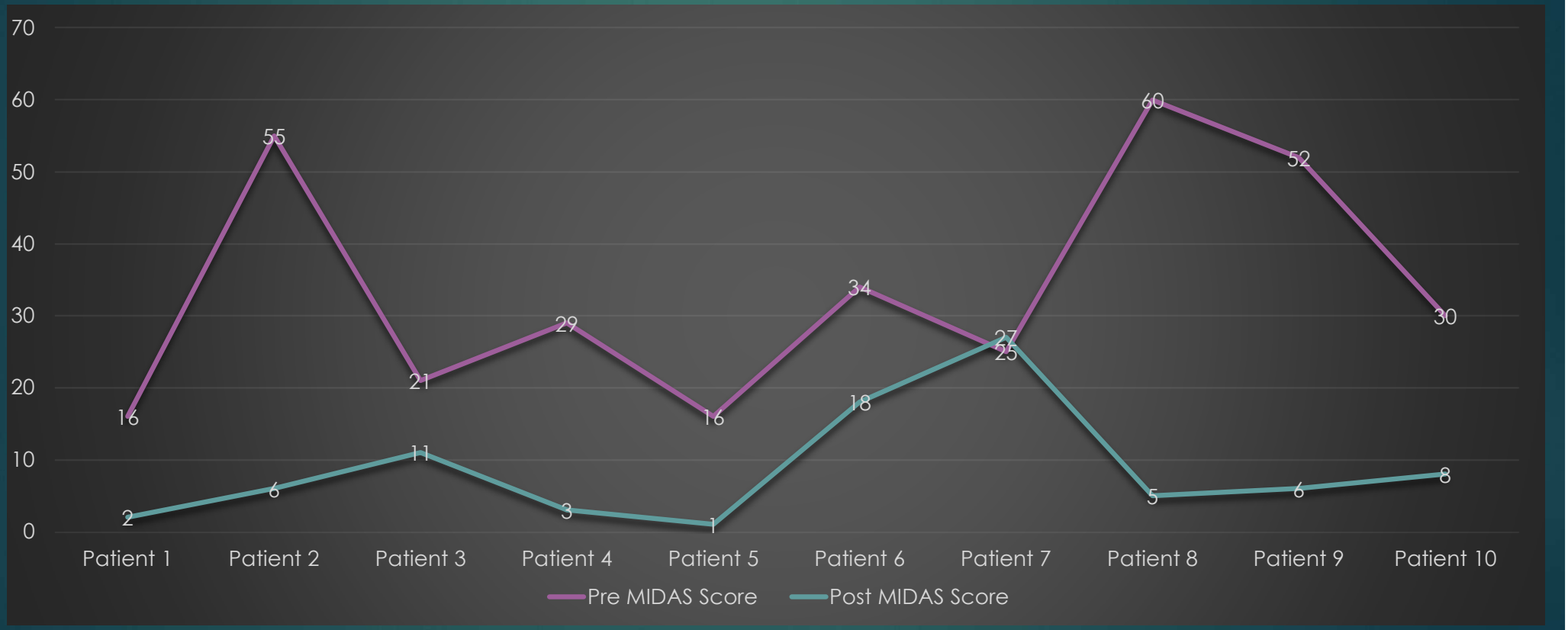
Duration of Care

- Participants were required to complete 3 months of care in our office

Frequency of Care

- Varied based on their holding patterns and response to treatment. An average of 12.5 visits were recorded during the 3-month treatment period.

Migraine Assessment (MIDAS) Scores



Trigeminovascular Theory

The most recent and widely studied theory involves the trigeminovascular system, which—under the influence of a variety of external and internal triggers—results in the release of various inflammatory peptides, including calcitonin gene-related peptide (CGRP), substance P, neurokinin A, and nitric oxide.

The resultant perivascular inflammatory response influences the trigeminal nucleus caudalis in the brainstem (the migraine generator) and cervical cord area, transferring pain data to the upper areas of the brain, including the thalamus and cortex. This leads to a state of hyperexcitability or cortical sensitization, resulting in the pain of migraine and associated features, including gastrointestinal (GI) and visual changes.

Theories on Why?

FLUID FLOW RESTRICTION

BUCKET THEORY

Fluid Flow Theory – Dr. Scott Rosa

Using MRI and CSF Studies, Dr. Rosa and Dr. Damadian have provided studies showing how the upper neck misalignment is affecting the flow of spinal fluid as well as blood flow

The result is that spinal fluid will not escape the brain, causing a backflow in spinal fluid

This backflow will cause swelling and will eventually crush the small blood vessels of the brain, resulting in migraine headache

Bucket Theory – Dr. Adam Harcourt

3 major stressors that contribute to Migraine susceptibility; Musculoskeletal Stress, Nutritional Stress and Hormonal Stress

Every Migraine patient has an area (or areas) of the brain that are genetically predisposed to have altered excitability

If you imagine those areas as a bucket, when they "fill up" with various stressors and overflow, you get a migraine. Some people have larger buckets, or stable brain areas, so it takes many stressors to lead to a migraine. Some have smaller buckets, or unstable brain areas, and experience a migraine from almost any stressor

Identifying the area of functional deficit to the brain allows us to target therapies or exercises to the part of the brain to stabilize it, or "make the bucket bigger"

Conclusions

- MIDAS Scores:
  - Pre Average ~34
  - Post Average ~8.5
  - Average Percentage of Improvement ~75%
- Taking a functional approach and looking at several different causations (Musculoskeletal, Hormonal and Nutrition) led to a 75% improvement in quality of life in patients suffering from Migraine
- In the future, I would like to have a greater number of participants, more data collection (such as pre/post bilateral BP etc) and implement more functional neurology therapies/exercises

Conclusion

- My hope is that this research study will help spark continued Migraine research from not only Upper Cervical Chiropractors but also Functional Medicine in order to provide a well-documented alternative to prescription drugs.

References

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