

Algometry Validates Chiropractic

Abstract

Pressure algometry is very well appreciated by the medical community as a valid and reliable measure of localized pain to muscle, joints, tendons, ligaments and bones. Physicians regularly use pressure algometry as an outcome measure for research studies and to document the efficacious nature of their treatment modalities. Over 100 peer-reviewed, scientific papers support these facts. This powerful measure has yet to be widely embraced by chiropractors. The prediction is that when chiropractors gain a full appreciation of algometry, patients, policy makers and the insurance industry will no longer be able to ignore the benefits of the chiropractic adjustment.

Objective

The objective of this paper is to orient chiropractors to the technology known as pressure algometry and its powerful ability to document the healing effects of the chiropractic adjustment on spinal joint pain.

Introduction

Chiropractors have always used pressure algometry as a part of their practice. Digital palpation that serves to probe and locate areas of pain and tenderness is technically a form of pressure algometry; digital pressure intended to "measure" pain. The problem has been that digital palpation is rather subjective and not a very reliable measure for the purpose of documentation.

This problem has been solved by using a simple compressive-force gauge fitted with a soft rubber tip implement. The compressive-force gauge (pressure algometer) measures the force in pounds/kilograms required to produce pain. It's simple and elegant; locate the area of discomfort and place the rubber tip of the algometer on it and slowly apply force through the algometer. The patient will inform you at the point when the sensation of "pressure" begins to feel "painful." Plenty of published papers are available to support its use.

Use of the pressure algometer, as described above, is actually measuring pain threshold as opposed to pain tolerance. Pain threshold is the point where a sensation like firm pressure begins to feel unpleasant and painful. Pain tolerance is the point where a painful stimulus can no longer be tolerated. This distinction is important in algometry.

So, how effective is algometry in documenting improvements made by adjusting alone? To answer this question, I used my algometer on 10 patient.

Materials and Methods

Each patient selected had complaints of pain between the shoulder blades. With palpation I determined that the T-5 vertebra was subluxated. With my algometer, I detected a lowered threshold

to pressure (as compared to surrounding facets) over the T-5/6 facet joint. They had an average pre-adjustment pressure threshold of 3.2 kilograms.

I adjusted each of these patients in the prone position and each had an audible release. I then let them lie prone for five minutes before taking postadjustment readings. Postadjustment algometer readings were performed at the exact locations as were the pre-adjustment readings. The average postadjustment pressure threshold measures were 4.4 kilograms.

Results

On the average, the 10 patients increased their threshold to pain by 1.2 kilograms. This may not seem like a tremendous increase, but it is statistically significant (paired t-value = 6.47, DF = 9, $p < 0.01$).

Discussion

The above study is just an example of pressure algometry in action in the chiropractic office. The algometer is a small, simple, hand-held device that is surprisingly powerful in documenting what chiropractors have known for nearly a century. As more is written about this device, it will be increasingly recognized as an outcome measure of choice and the new gold standard for validation.

As I follow the developments in algometry research, it is becoming clear that independent insurance companies, workers' compensation boards, and disability raters will increase their dependence on pressure algometry as an objective outcome measure. There is a fast growing body of evidence that this will be a trend this decade. It would therefore be prudent for chiropractors to become familiar with this technology. After all, what you don't know tends to be used against you.

There is more good news than bad news, and chiropractic validation is certainly one of those good points. The other good news is the cost of this technology. Unlike other technical advances, the price tag for pressure algometry is comfortably under \$300.

Conclusion

It behooves chiropractors to embrace pressure algometry as a way to validate their practice to patients, the medical community and third-party payers. The time is ripe for an explosion in the use of chiropractic care, and with the right kind of scientific support, nobody in their right mind would argue differently.

*Andrew Bonci, BA, DC, DAAPM
Tuckahoe, New York*

Editor's note: Anyone interested in collecting additional information on pressure algometry, its use in the office or a 10 year collection of citations and abstracts detailing its validity and reliability, should feel free to contact Dr. Bonci, P.O. Box 120, Tuckahoe, New York 10707. Tele: (914) 337-6627.

JULY 1994