

# **EFFECTS OF UPPER CERVICAL CORRECTION ON CHRONIC CONSTIPATION**

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## **ABSTRACT**

A five-year-old female with severe, chronic constipation was treated with Grostic upper cervical care with a dramatic change in the child's bowel function occurring.

## INTRODUCTION

Americans spend \$1,369,863 every day on laxatives to relieve constipation.<sup>1</sup> Bowels that do not eliminate properly may cause headaches, lassitude, low back pain, abdominal pain and distention; even anorexia.

The relationship between spinal misalignment and colon dysfunction has been documented in the medical literature since 1921 by Henry Winsor, M.D.<sup>2</sup> and N.T. Ussher, M.D. in 1933.<sup>3</sup> Also, a recent Scandinavian study showed a high correlation between patients with digestive organ diseases and

spinal subluxations affecting the nerves to the abdomen.<sup>4</sup>

A study by Wiles found a significant increase in basic gastric tone ( $p < 0.01$ ) as well as "normalization" of the wave patterns in patients who received upper cervical adjustments as compared to the control group.<sup>5</sup> Another study involving 316 infants suffering from infantile colic found primary upper cervical chiropractic care resulted in satisfactory results in 94% of the cases.<sup>6</sup>

## HISTORY

The patient is a five year old female who had previously been under chiropractic care since the age of almost two. The chief complaint at that time had been low back pain which had responded well to the doctor's care. However, the patient was still experiencing only

one bowel movement per week and it had to be induced with medication. She had problems with her colon since she first began to walk, but the constipation had become severe for over one year causing her to be lethargic.

## PRE-TREATMENT FINDINGS

It should be noted that during the transition between doctors, the patient was adjusted with full spine diversified technique. After the transition, the new doctor observed that the patient had a left short leg of 1/4 inch,

palpable muscle spasm at the C1-C3 and lumbar regions, left head tilt and infrared temperature imbalance at the C1 fossa area. At this time it was suggested to the patient's grandmother that the three Grostic upper cervical x-rays be taken.

## X-RAY ANALYSIS

The lateral cervical view revealed a normal lordotic curve with an atlas S-line of 3+. The nasium x-ray revealed the atlas vertebra was subluxated  $2\frac{1}{4}$  degrees to the left on the condyles of the skull. The spinous process of the axis was subluxated 3 degrees to the

right. The cervical spine from C2-C7 inclusive was misaligned a measured  $1\frac{3}{4}$  of a degree to the left. The vertex view revealed the atlas to be subluxated anterior on the left by  $7\frac{1}{4}$  degrees.

## PROGRAM OF CORRECTION

The patient was adjusted by hand utilizing the Grostic procedure. The patient experienced a bowel movement the day after her first specific adjustment without the use of

medication. Over the next two weeks the patient experienced 4-6 movements per week with only two adjustments being required to reduce the nerve interference. Then the

patient experienced a fall which required an adjustment on two successive visits. During the next 19 days the patient only had five bowel movements. After this setback the subluxation became stabilized and daily bowel movements returned.

Over the next two months the patient was monitored with no exacerbation of her symptoms occurring nor the need for further adjustments. It was also noted by the patient's grandmother that the child's energy level had been increased as the daily bowel movements continued.

At this point the patient experienced a fall out

of a window in which she fell on her head. She was then x-rayed and no fractures had occurred, but the atlas now measured  $3\frac{1}{4}$  of a degree to the left, axis spinous was 5 degrees to the right, C2-C7 was  $1\frac{1}{4}$  of a degree to the right and the atlas was subluxated  $6\text{--}3\frac{1}{4}$  degrees anterior on the left side. The patient had already started experiencing trouble going to the bathroom since the fall 1- $\frac{1}{2}$  days previous. After a minor change was made with the adjustment factors, the patient was adjusted and follow-up visits have revealed once again, daily bowel movements and no further nerve interference.

## OUTCOME ASSESSMENT

Normally two post x-rays are taken after the first adjustment to verify the amount of subluxation correction, but due to the patient's age an exception was made. Although it was noted that the patient's functional short leg, muscle spasm, postural and infrared temperature findings all balanced after reduction of the occipito-atlantoaxial subluxation complex. The x-rays taken after the severe fall did reveal that all of the subluxation factors were reduced, with the

exception of the axis spinous, when compared to the original x-ray measurements.

It should be noted that due to the patient's history, age and extreme shyness towards the doctor, any connection between the patient's mind and the results obtained is highly unlikely. The patient's mother and grandmother have discontinued the use of medication to treat the child's former constipation since the start of her upper cervical care.

## DISCUSSION

The Dentate Ligament-Cord Distortion Hypothesis offers a mechanism whereby the effects of misalignments of the upper cervical vertebrae produce mechanical distortions of the spinal cord.<sup>7</sup> The hypothalamospinal fibers are descending autonomic projections which travel through the upper cervical spinal cord and near the spinocerebellar tracts. These direct descending autonomic fibers influence preganglionic sympathetic and parasympathetic neurons at different levels.<sup>8</sup> Spinal cord traction, which affects the spinocerebellar tracts, could irritate the hypothalamospinal fibers by either mechani-

cal or vascular means or both. This could result in abnormal parasympathetic nerve function which could slow down and alter the function of the colon. Another mechanism could play a role due to the patient's extreme amount of atlas rotation ( $7\text{--}1\frac{1}{4}$  degrees) and the anatomical location of the inferior vagal ganglion. Mechanical irritation of the nodosal ganglion by this unusual atlas subluxation could cause changes in parasympathetic stimulation as well.

Crowe and Kleinman have described a mechanism involving proprioceptive deafferentation of the reticular formation due

to an upper cervical subluxation.<sup>9</sup> This could affect the autonomic nerve function to the colon.

The occipito-atlantoaxial subluxation complex and its correction has an effect on the lumbopelvic region.<sup>10,11,12,13,14</sup> Since the upper lumbar spinal nerves innervate the colon,<sup>15</sup> a secondary subluxation in the region could also play a role with chronic constipation.

Several scientific studies have found a link

between gastrointestinal disorders being influenced by a physical stimulus to the body.<sup>10,16,17,19,20</sup> These studies are often used to support the somatoautonomic reflex hypothesis.

Continued research is necessary to reveal which hypothesis or combination of hypotheses is the mechanism by which this malfunction occurs. Clinically, the results from this case seem to be the rule and not the exception in many chiropractic offices.

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