Eye Contact, Appetite, and Vomiting Improved in Children With Autism Spectrum Disorder After Visceral Osteopathic Technique


In a novel research approach, researchers in the United Kingdom assessed the application of visceral osteopathic technique (VOT) to children aged between 3½ and 8 years who had a diagnosis of autism spectrum disorder (ASD) and whose medical records included significant gastrointestinal dysfunction. Forty-nine children met inclusion criteria of ASD and gastrointestinal symptoms, including abdominal distention or pain, constipation, chronic diarrhea, and foul-smelling stools or flatulence. Parental approval was required for participation.

The trial used a single-patient design, and each patient acted as his or her own control using pre- and posttreatment repeated measures. This design is particularly appropriate for the ASD population because separate homogeneous groups of patients with ASD are virtually impossible to assemble as a result of the vast array of ASD presentations.

The modified standardized Autism Research Institute/Secretin Outcomes Survey Form was used to assess social behavior, ritual, and repetitive activities; digestive symptoms; and general symptoms. Parents filled out the forms 4 times during the 6-week control period; 4 times during the 6-week treatment period (weekly treatment sessions); and 1 time during the posttreatment period at week 18. At each treatment session, any changes in health status, changes in the patient’s diet or medication, and any infections were assessed to confirm the safety of continuing in the study.

The intervention was administered using standard VOT procedures to the ileocecal valve, mobilization of the duodenum, mobilization of the ligament of Treiz, mobilization of the pancreas, and sigmoid colon technique.

The main effects analysis for ritual and repetitive activities, digestive signs, and general signs were not significant. However, there were significant subscale differences before and after VOT for less vomiting ($P<.001$), improved appetite ($P=.039$), and improved eye contact ($P=.035$).
The authors cite limitations of no randomization and participant self-referral by the parents. The authors also suggest a possible gut-brain axis mechanism of action in which worsening of behavior symptoms may be a result of inflammatory gut reactions mediated by immunologic signals. As a source for such speculation, the authors cited the osteopathic research of Hodge et al.\(^1\,^2\)

This article demonstrates a possible benefit of osteopathic intervention in this special needs population and thus warrants additional investigation. (doi:10.7556/jaoa.2016.064)

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References

Postural Balance and Gait Improved With an Osteopathic Intervention in a Special Needs Population


Researchers at the Istituto Auxologico Italiano in Piancavallo, Italy, evaluated the effects of a single application of osteopathic manipulative therapy (OMTh; manipulative care provided by foreign-trained osteopaths) on patients with Prader-Willi syndrome (PWS). This condition is a relatively rare genetic disorder affecting a part of chromosome 15. Major clinical features of PWS are short stature, obesity, scoliosis, developmental delay, muscular hypotonia, reduced physical activity, and gait and postural disorders. Study participants were 10 patients with genetically confirmed PWS. Two control groups were used: one of 15 obese individuals and another of 20 normal-weight healthy participants. Obese participants were recruited among other inpatients in rehabilitation, and healthy participants were recruited from the institute staff. Exclusion criteria included history of cardiovascular and neurologic conditions or musculoskeletal complaints, vision loss, vestibular impairments, symptoms related to intracranial hypertension or use of neuro-active drugs, pregnancy, and substance abuse.

The outcome measures were 3-dimensional gait analysis and static posturography. The PWS participants were assessed on admission and 24 hours after OMTh. One-time assessments were made with the control participants.

Participants in the PWS and obese groups received conventional treatment, but the PWS participants additionally received OMTh, which was delivered in a single 45-minute session. This was a pragmatic OMTh session delivered before any other intervention or rehabilitation by a registered osteopath. Somatic dysfunction was assessed, and the major sites addressed by OMTh were the spine, legs, dural system, and thoracic respiratory diaphragm. Procedures used included “thrust,” muscle energy, strain-counterstrain, and myofascial release.

Before treatment, the PWS group had a significantly slower walk, shorter stride length, reduced cadence, and reduced postural stability compared with both control groups. After treatment, the PWS participants showed significant improvement in knee and ankle kinematics with greater ground push-off force. Postural stability also improved significantly, with reduced anteroposterior and mediolateral sway. The authors noted the small sample size as a limitation, and