PHYSICAL THERAPY
FORUM

Vol. V No. 23 MIDDLE ATLANTIC EDITION June 4, 1986

With an Eclectic Approach-- Another Piece to the Puzzle

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To date, neurodevelopmental and sensory integration techniques have dominated therapies used with children demonstrating motor delays. However, clinically there are always those children with significant delays who don't respond as well as anticipated, or whose progress seems to have more potential than what has been actualized. These cases present many unanswered questions. Therapists must continually problem solve and search for new ideas and new approaches in order to best facilitate these children's development.

As a surge of training and information has been made available about myofascial release and craniosacral therapy, the potential value of these techniques to pediatric therapy also comes into focus. Myofascial release and craniosacral therapy involve gentle, easy to learn therapy techniques which have been used with children of varying diagnoses (cerebral palsy, learning disabilities, etc.)[2,3] Palpation and touch are used to release restrictions found in the fascia of the body.[2,3] Through trauma (including birthing), accidents, or physical dysfunction, the fascia of the body can get bound down--influencing total body functioning through its interrelationship with the nervous, musculoskeletal, vascular, lymphatic, endocrine, and respiratory systems.[1,2,3]

Case Report

The patient is a 3 1/2-year-old girl who has a left hemiparesis resulting from a bleed in the right basal ganglia which occurred when she was 2 1/2-years-old. It is also suspected that she probably had mild neurological impairment prior to the insult, since her history demonstrated mild motor and speech and language dysfunction.

The patient received Occupational Therapy, Physical Therapy and Speech and Language Therapy two to three times a week (1 hour sessions) since the stroke. The occupational therapist and the physical therapist worked intimately together to coordinate the child's program. Neurodevelopmental and sensory integration techniques were used with special emphasis on inhibition, which had reasonable success. Although prognosis was for excellent recovery, and significant gains were observed in all areas, the child's response to therapy and progress continued to be unpredictable and cyclic. She would appear to make slow gains for approximately 6-8 weeks, and suddenly regress and fail to respond to intervention for 1-3 weeks more for unknown reasons. The cycle would then repeat itself.

Although irritability and sensitivity to movement and touch improved with therapy, these difficulties persisted and impeded progress. Sleeping was plagued with extreme restlessness since the stroke, and was interrupted with screaming and crying 2-10 times a night. Breathing patterns were irregular and marked with breath holding both during activity and at rest. Solving these difficulties seemed paramount to this child's recovery, and traditional approaches were unsuccessful at overcoming them.

At 15 months past stroke, the child was taken to the Pain and Stress Control Clinic in Paoli, Pennsylvania for myofascial release and craniosacral therapy. The child received one treatment per day for ten days (40-60 minutes per session). During this time the child received no other therapy.

Evaluation

The myofascial and craniosacral evaluation revealed many significant dysfunctions. Lower extremity and pelvic examination revealed that the sacral base was unlevel. In comparing the left and the right anterior superior illiac spines (ASIS), and the posterior superior illiac spines (PSIS), the right ASIS was low and the right PSIS was high. The right lower extremity was long and the right femur was internally rotated. This resulted in internal rotation of the foot during ambulation. There was

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Myofascial Release Techniques *(Continued)*

myofascial restriction of the pelvic floor, respiratory diaphragm (especially on the left side), and the thoracic inlet. The occipital condyles were compressed probably restricting natural drainage from the cranium. A myofascial restriction of the left latissimus dorsi extended up into the left extremity and into the left wrist restricting movement. Touch sensitivity at the left wrist was also observed. A cranial evaluation revealed that the fascia of the cranium was also restricted, resulting in the internal rotation of the right temporal bone. There was restriction of the sphenoid bone and compression of the sagittal and coronal sutures. The maxilla was externally rotated and the vomer torsioned.

Treatment Techniques and Recommendations

1. Myofascial release of the pelvic floor, diaphragm and thoracic inlet.
2. Arm pull on left upper extremity and release of the lattissamis dorsi.
3. Occipital condyle release.
4. Dural tube stretch.
5. Parietal lift.
6. Spenoid lift.
7. Direction of energy through falx cerebri.
8. Somato emotional release.

Therapy Results

The following are descriptions of the changes observed by parents, current therapists and teachers following the ten treatment sessions.

Mobility/Stability

By the third treatment the child's pelvis was aligned and her right foot remained in neutral position for 95% of ambulation. By the tenth day of therapy, general fluidity of total body movement improved significantly. The beginnings of a reciprocal arm swing were observed when the child was not overly stressed. She demonstrated increased symmetrical use of both arms and began exploration of space above and behind her head (which she had never attempted before). Decreased tension was noted in the pelvis, thoracic and diaphragm areas through palpation. Posture improved significantly with less lordosis and broader chest and shoulders. Scapulas no longer were winging. She now has been using and exploring flexion, extension, and rotation appropriately during activity. Body differentiation--especially distal movement of extremities, has begun to emerge. Abdominals now are more consistently used, whereas previous performance was highly fluctuating. A decreased sensitivity of the left arm was observed. By the end of the ten days of therapy, the child also began to develop good bilateral jumping.

Affect and Arousal

After the first session, a hazy pinched facial expression was replaced by a relaxed, comfortable facial response. Her eyes became alert and clear. Her complexion changed from grayish to a health glow. Her affect and mood changed from solemn and dull to alert and smiling. Irritability dissipated. She appeared more engaged with people and her environment. An increase in activity and energy level was observed. Arousal was significantly improved. Activity was busy, but constructive, and she demonstrated none of her previous pattern of frenzied nonpurposeful activity or overarousal and oversensitivity to movement and touch. The child now actively seeks out and responds pleasureably to movement and touch experiences which she previously has resisted or had responded to with overarousal. She also demonstrated a notable increase in adaptability to change in the environment and new situations. Previously, minor changes in environment predictably would increase irritability and facilitate deterioration in behavior and sleeping very quickly. None of that has been observed since the ten days of therapy. Irregular breathing and breath holding continue to improve and are now evident only when the child is being stressed.

Sleep patterns changed dramatically. After the fourth day of treatment, the crying out during sleep stopped. Sleep interruption at times still occurs, but not more than two times a night and she now sleeps soundly three to five nights a week. Interruptions now occuring appear to be more behavioral and habitual.

Speech and Language

By the third day, both the quantity and quality of verbalizations increased significantly. Unfortunately, no speech and language testing had been done just prior to the therapy sessions. However, changes have been observed and supported by the child's current speech and language clinician through subjective clinical observation. These changes have also been observed by other professionals and non-professionals involved with the child. Previous sentence length was an average of 3-4 words per sentence. She was not asking or answering "wh" questions. She initiated and participated in very little interactional dialogue. When she attempted to describe an event or object, her sentences lacked good coherent structure and connectiveness. She had significant word finding problems. Ever since the third session of myofascial release and craniosacral therapy and without further speech and language therapy, the child began talking almost incessantly and commenting about events happening around her. The child's sentence length has increased 7-8 words per sentence (averaged). She is now asking many forms of questions. She has engaged peers and adults in interactional dialogues appropriately and maturely. No change has been observed in word finding difficulties, and response to and processing of "wh" questions is still difficult.

Summary

This child appears to have made significant progress and changes in mobility/stability patterns, arousal and sleep, and speech and language following treatment sessions using myofascial release and craniosacral therapy. At the end of these sessions, assessment indicated that there was still evidence of myofascial and craniosacral restrictions, warranting a need for continued tharapy using these techniques. The child continues to receive Speech and Language Therapy, Occupational Therapy, and Physical Therapy services two

to three times a week. Myofascial release and craniosacral therapy are currently being used in conjunction with neurodevelopmental and sensory integration techniques with significant and steady progress. No more cycling has been observed.

It is felt by parents and therapists involved with this child, that myofascial release and craniosacral therapy have been crucial in her response to all therapies. An eclectic approach using myofascial release, craniosacral therapy, and more traditional therapies (to facilitate a normal sensory motor development) appear to be paving the way for this child to reach her fullest potential in all areas.

References

1. **Bishop, Tory:**
   "Fascia: A lierature Review."
   Physical Therapy Forum, Vol IV, No. 47, p. 1-3 November 27, 1985
2. "Myofascial Release Adds Dimension to P.T.'s Private Practice."
   Physical Therapy Forum, Vol III, No. 3, p. 1, 6
3. **Upledger, John E.; Vredevoogd, Jon D:**
   Eastland Press Seattle, WA
   Craniosacral Therapy
   Eastland Press, Seattle WA 1983

(Special thanks to John Barnes and the Pain and Stress Control Clinic Staff for their time and skill in administering the initial myofascial and craniosacral therapies.)