Significant Research on Birth Trauma & its Effects on the Newborn’s Nervous System

Towbin: *Latent Spinal Cord and Brain Stem Injury in Newborn Infants*

Towbin: *Spinal Injury Related to the Syndrome of Sudden Infant Death Syndrome*

Adams, Babyn, Logan: *Spinal Cord Birth Injury: Value of Computed Tomographic Myelography*
- Presence of spinal cord swelling in neonates with difficult delivery, absent respiration, flaccid paralysis, sensory level, and neurogenic bladder.

Reid: *Birth Injury to the Cervical Spine and Spinal Cord*
- Mechanical force is known to damage the cervical cord and spine.

Yates: *Birth trauma to the vertebral arteries*
- Damage to the cervical spine is fairly common in a series of stillbirths and neonatal deaths.

Gutman: *Blocked Atlantal Nerve Syndrome in Infants and Small Children*
- "After every difficult birth, observation of CO-C1-C2 complex should be "obligatory"
- With developmental impairment, CO-2 should be examined and specifically adjusted.
- "The success of the adjustment overshadows every other type of treatment"
- Examination of more than 1,000 infants showed C1 subluxation with impaired motor function, lowered resistance and increased infection.

Kinney: *Relationship Between SIDS Infants and a Deficiency in Neurotransmitters*
- Evidence on autopsy of a deficiency (of unknown origin) of neurotransmitters that regulate carbon dioxide levels.

Pamphlett, Raisament, Kum-Jew: *Vetebral Artery Compression Resulting from Inlead Movement: a Possible Cause of SIDS*
- Bilateral vertebral artery compression was seen between CO and C I in the neck-rotated position.

- The rate of intracranial hemorrhage is higher among infants delivered by vacuum extraction, forceps or cesarean section.

Editorial; NEJM: *Birth Injury and Method of Delivery*
- Based on FDA advisory committee entitled, "Need for Caution When using Vacuum Assisted Delivery Devices"

Biederman: *Kinematic imbalances due to suboccipital strain in newborns*
- 135 children younger than 24 months all treated by specific "manipulation" of suboccipital joints caused by: intrauterine malalignment, assisted births (extraction side), prolonged labor, multiple fetuses, and higher trauma.

Lewitt: "Manipulative therapy in the rehabilitation of the locomotor system"
- Fixations first manifestation of vertebrogenic disease- appears at a young age.

Frymann: *Infants Affected by VS.*
- Examined 1,250 babies 5 days postpartum.
- 211 suffered from vomiting, hyperactivity, sleeplessness
- Manual exam revealed cervical strain in 95% strain released by specific cervical adjustment