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2022 ICAP Convention

September 1-4, 2022

Vancouver, Canada



Thursday, September 1

Opening // How ICAP Can Help You Build Your Multidisciplinary Collaborative Team

Brynn Leroux, DDS

Partner/Pediatric Dentist, Baton Rouge, Louisiana, U.S.

Abstract. This presentation will open the conference by highlighting the history of ICAP and how, by its very nature, ICAP promotes multidisciplinary collaboration in the diagnosis and treatment of tethered oral tissues.

Plenary 1: When Babies Grow Up (and Grow Older)

Linda D'Onofrio, MS, CCC-SLP

D'Onofrio Institute for Advanced Myofunctional Studies, Portland, Oregon, U.S.

Abstract. Obstructive sleep apnea can happen at any point during a person's life, and it can be caused by a number of different factors. As a person ages, changes in body weight, muscle tone, and body posture impact the airway, during the day and most importantly at night. Life conditions change how, when and where people are able to seek out and benefit from surgery and therapy. Diagnosing and treating kids, teens, young adults, older adults and the elderly requires multidisciplinary care and multifactorial thinking. This presentation is a brief summary of the diagnostic and treatment considerations of patients throughout the lifespan.

Obtaining Compliance with Active Wound Management (or "How Do I Get These Stretches Done Right?!")

Jessica Altemara-Trent, IBCLC

Bliss at the Breast, North Carolina, U.S.

Abstract. Active wound management following surgical release of oral restrictions is recommended by the majority of providers. This task is something with which many parents struggle deeply. Conveying adequate technique while empowering parents to perform these exercises successfully is one of the most challenging aspects of obtaining optimal healing. This presentation

will cover tools and techniques that empower parents toward more consistent success with active wound management.

Tension, Ankylofrenula or Both? Understanding the Multifaceted Approach to Identify, Diagnose and Maximize Overall Tongue Function

Jenna Davis, DC, FIAMA

Baby Boom Creations/Acorn Family Health & Wellness Centre, Oakville, Ontario, CA

Abstract. Is it tension creating poor or altered tongue function or a tongue-tie creating tension? Tongue-tie is deemed to be present in 4-11% of infants worldwide yet we are seeing a much larger percentage of infants and children having challenges. Ankylofrenula and its associated tension is rarely a solitary issue. An infant begins to learn their suck and swallow patterning by 16 weeks *in utero* and creating many compensatory patterns by birth. Additional factors such as intrauterine constraint/positioning, neurological disorders, low tone, and birth trauma can also cause increased tension and tone. Poor tongue function, regardless of cause, can present in many ways such as alignment issues, poor adaptability, colicky behavior, reflux, mouth breathing, digestive issues and even hitting milestones too early. If this increased tension remains unaddressed it could lead to long term repercussions impacting all stages in life. Specifically in terms of ankylofrenula and tongue function, here continues to be insufficient or misunderstood and whole body and functional assessments and observations across professions. There has been a shift towards the importance of identifying and releasing tension to improve tongue function, often prior to a release being decided upon, but there lacks an interprofessional understanding on when, why and who should be involved. In this talk, we will discuss common presentations and share clear and reproducible observation and assessment tools for overall tone and function. We will cover identifying factors between tension from increased tone versus ankylofrenula. Developmental, functional, behavioral and neurological

impact of unaddressed tension in infants will be discussed. Finally, we will address treatment options, care plans, home exercises, timing and multidisciplinary support for these infants and families.

How to Become an Airway Dentist

Shannon Thorsteinson, DMD

Shannon Thorsteinson, DMD, PC/ Myogrow Center, Atlanta, Georgia, U.S.

Abstract. Becoming an airway dentist is an exciting journey, but can be overwhelming, confusing, and expensive. My aim is to help others determine which aspects of airway health they want to incorporate into their practices, which they want to refer, how to create a team, and decide whether to be airway-aware or airway-treating practitioners. It is important before investing a lot of time and money to understand the end points of where this leads, the implications for your career trajectory, profitability, and life goals. We believe this is the future and we are improving lives. The goal of this course is to begin the process of mapping out how to incorporate all this in a practical way from the beginning. What are your practice circumstances? Are you an associate or owner? What are your long-term goals? Get good at diagnostics and having tough conversations with patients. Understand when to give more information vs. when to plant a seed and wait. Decide if you want to screen or treat.

The Role of the CranioSacral Therapist in the Treatment of Ankyloglossia

Patricia Berg, IBCLC, CST-D

*Lactation Consultant and Craniosacral Therapist
Lactation Support Group, Inc., Connecticut, U.S.*

Abstract. Ankyloglossia has the potential to create strain patterns that originate with the extrinsic muscles of the tongue. These strain patterns may impact craniofacial development, anatomical stricture as well as musculature and cranial nerve function. When there is difficulty eating and breathing, the stress felt by the system may result in activation of the autonomic nervous system putting the reticular activating/alarm system (RAS) into overdrive. A surgical release of the frenulum is only the first step in aiding the healing of the total body system. CranioSacral therapy is a modality that facilitates bringing the body into normal physiological motion and functionality.

Plenary 2: Bottle Feeding: A First Look at Improvements in Bottle Feeding Mechanics after Frenectomy

Bobby Ghaheri, MD

The Oregon Clinic, Portland, Oregon, U.S.

Abstract. This session will explain the underlying mechanisms of tongue mobility using unique technological approaches of submental breastfeeding ultrasound and a Bluetooth-enabled bottle feeding system capable of detecting tongue movement during sucking.

Friday, September 2

Plenary 3: Sensori-motor influences on speech perception in pre-verbal infants

Alison Bruderer, PhD

University of British Columbia, Vancouver Island, British Columbia, CA

Abstract. Language acquisition research has primarily assumed that only infants' auditory experiences influence the development of their spoken language. However, there is growing evidence that pre-verbal infants detect and utilize the correspondence between heard speech and oral-motor information during the process of language acquisition. By using behavioral and neuroimaging techniques, we show that inhibiting pre-verbal infants' tongue movements changes their ability to distinguish speech sounds. In these studies, teething toys are placed in the mouths of 3- and 6-month-old English-learning infants while they listen to speech sounds that infants at these ages can readily discriminate. When the tethers restrict movements of the tip of the tongue, infants' discrimination between these two sounds is disrupted. But when their tongues are free to move, infants are able to make the distinction. These findings raise questions about whether and how much time infants need with 'free' tongue movement for speech perception to develop normally. The freedom to move their tongue and other articulators when listening to speech sounds may be an important factor in infants' developing perception of speech.

Why won't they listen to us: A CIREAS talk about TOTS research?

Raymond J. Tseng DDS, PhD^{1,2}

¹Adjunct Faculty, Dept. of Pediatric Dentistry, Adams School of Dentistry, University of North Carolina at Chapel Hill, Chapel Hill, NC, U.S.; ²North Carolina Tongue Tie Center, Cary, North Carolina, U.S.

Background. Interest in ankylofrenula and the sequelae of restrictive labial and lingual frenula has increased significantly, but the body and quality of supportive research has not kept up. More carefully controlled and well-designed studies focused on diagnosis and treatment are needed, and the rationale for proposing such treatments should be supported by primary data.

Purpose. The presentation's purpose is to familiarize clinicians with protocols that increase the accessibility of high-value clinical data to be standardized, collated and analyzed for research progress. Another purpose is to present and discuss ICAPs newly formed scientific affairs committee, Committee on Interprofessional Research, Education and Ankyloglossia Science (CIREAS).

Methods or Approach. Implementation of three data collection techniques in clinical practices are discussed. Techniques include use of 1) aggregate well-designed clinical encounter forms with repeated follow-ups, 2) Google forms to collect symptom information from current and prospective patients, and 3) a modified medical history and intake questionnaire paired with dental exam data.

Conclusion. Three protocols that can help clinical practices contribute research data with little to no impact on clinical encounters or productivity will greatly increase the volume and speed at which ankyloglossia research can be completed. Primary data describes the top ten ankyloglossia-associated breastfeeding symptoms; data also showed severity of labial frenula is not associated with increased risk of dental decay in primary maxillary incisors. A new scientific affairs committee, CIREAS, will work to advance the scientific rigor of all ICAP sponsored activities and programs.

Significance (impact and reach). These data are significant for parents deciding on whether a frenectomy procedure is warranted giving parents factual data on the most common symptoms reported and refutes the commonly held belief that a restrictive lip tie leads to increased risk for dental decay. Our data show that lip tie severity does not affect risk for dental caries on anterior teeth in young children.

Helping Parents Navigate the Roller Coaster of Tongue Tie

Renee Beebe, M.Ed., IBCLC

The Second 9 Months, Seattle, Washington, U.S.

Abstract. The diagnosis of tongue tie can send parents reeling. Especially true when they receive conflicting information from the pediatrician, various lactation consultants, nurses and other parents. In this age of instant information and social marketing, everyone seems to be an expert. What is a parent to do? Who does a parent trust? What is the right course of action? Using case studies from over 30 years in the field of lactation, the presenter takes us through the tongue tie journey from the evaluation through the myriad possible steps to successful breastfeeding. Assessment, release, body work, maintaining milk supply and keeping the breastfeeding person in the game until the baby can breastfeed all present challenges to the practitioner. This is especially true since each dyad needs its own individualized plan that may morph frequently as treatment progresses. We will go through the process of identification through resolution from the experience of her clients. She will also explore some cultural/regional differences and the challenges working with families through the tongue tie roller coaster.

Lingual Function Junction: The Thin Line between Lingual Function and Periodontal Disease Progression

Karese Laguerre, CRDH, MAS

Myofunctional Therapist/The Myo Spot, Parlin, New Jersey, U.S.

Abstract. Periodontal disease is often poorly managed in many who suffer from it. Despite intentional increases in oral hygiene habits such as brushing with an electric toothbrush or performing daily flossing, stability in periodontal health maintenance can vary. Research has shown a correlation between malocclusion, tethered oral tissues, tongue thrust and parafunctional habits in the biomechanical contribution towards periodontal disease progression. Many of the aforementioned contribute to orofacial myofunctional disorders which can be resolved or managed with myofunctional therapy and lingual frenectomy; removing one or many factors in the chronic periodontal disease progression. A new look at the link between lingual function and periodontal disease management.

Plenary 4: Functional Evaluation and Treatment Planning for Pediatric Sleep Disordered Breathing

Audrey Yoon, DDS, MS

Adjunct Assistant Professor Stanford Sleep Medicine, Los Angeles, California, U.S.

Abstract. As knowledge of sleep medicine increases, it is critical that health providers are equipped with the knowledge to help contribute to interdisciplinary care for pediatric patients with sleep-disordered breathing. Dentists can manipulate and guide craniofacial growth patterns depending on a patient's age. Dr. Yoon will go over the strategies to maximize the patient's potential skeletal growth during maturity and to intercept the targeted structure at the right time

Assessment of Tongue Tie in Children from 1 to 10 Years: An International Investigation

Sharon Smart, PhD, BSc, CPSP, FHEA

Senior Speech Pathologist & Lecturer Curtin University, Perth, Western Australia, AUS

Zoe Whitfield

Curtin University, Perth, Western Australia, AUS

Mary Claessen, PhD, CPSP, FSPAA

Senior Lecturer Curtin University, Perth, Western Australia, AUS

Abstract. Valid and reliable assessment tools are integral for evidence-based clinical decision-making. This presentation will provide an overview of an international investigation of the clinical assessment practice of speech pathologists and scoping review of assessments of children tongue-tie aged one to ten years.

Summary

Clinicians use a range of assessment tools to measure lingual frenulum structure and function in infants, many with strong psychometric properties, such as the Assessment Tool of Lingual Frenulum Function [1] and the Lingual Frenulum Protocol for Infants [2]. However, few researchers have investigated the assessment of tongue-tie in children over 12 months of age. This study aimed to explore assessment tools for children from one to 10 years of age in the literature and utilized within clinical practice.

Phase 1 involved a systematic scoping review based on the procedure by Levac et al [3]. Phase 2 was an international online survey. A total of 194 English-speaking practicing speech pathologists participated. Survey questions included participant demographics,

caseload incidence of tongue-tie, referral pathways, familiarity with evidence-based assessment measures and tools, and assessment practices

Sixty papers met the criteria for inclusion in the scoping review. A range of diagnostic measures were identified, falling into three categories: measures of tongue structure, oral motor tasks, and functional activities. Three comprehensive assessment protocols and five classification systems were identified for use with one-to ten-year-old children. Similarly, survey participants reported using a wide range of measures through case history, oral examination, and clinical assessment. These included measures of tongue structure, oral motor tasks such as tongue elevation and protrusion, and functional activities including speech, feeding, and swallowing.

Overall, there was large variability in the measures obtained and psychometric properties of tools for assessing tongue-tie in children. Several studies assessed tongue-tie based on appearance or tongue structure only. Most clinicians reported the use of a range of measures of tongue structure and function when assessing children with potential tongue-tie, and few use published tongue-tie assessment tools in clinical practice. Clinicians reported the use of assessment tools that were not designed or validated for use with children over 12 months of age.

The findings of this study reiterate the need for a comprehensive tool to measure tongue structure and function in children beyond the neonatal period and infancy, designed and validated on older children.

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Role of Manual Therapy to Prepare the Breastfeeding Dyad for Frenectomy and Promote Successful Outcomes

Darlene Buan-Basit, DC

Chiropractor/Chiropracticpilates, Toronto, Ontario, CA

Abstract. Infant Manual therapy prepares the infant for frenectomy and promotes success. Evaluating other musculoskeletal restrictions and using manual therapy techniques to reduce those restrictions helps the

doctor/dentist access the frenulum and oral structures. Improving myofascial restrictions and joint alignment in the neck and jaw facilitates effective feeding. Infant and maternal red flags are also presented as barriers to success.

Summary

Infant manual therapy can help prepare the infant for the frenectomy by assessing the neuromuscular function and other restrictions in the myofascial system. This includes range of motion of the cervical spine, particularly, rotation to facilitate the rooting reflex, and, extension, to promote efficient feeding mechanics and temporomandibular joint (TMJ) range. Cervical spine and TMJ mobility are important for release providers to adequately access the oral cavity and assess structure and function. Assessment of the shape of head and reflexes include newborn primitive reflexes of rooting, sucking, and gagging. Oral structures to evaluate include the following muscles: suprahyoid and infrahyoid muscles, masseter, pterygoids, temporalis, buccal fat pads. Tongue function and range can be limited by tongue bundling and inadequate lateralization of tongue. This list is not inclusive.

For an infant to feed effectively, the suck-swallow-breathe cycle would need to be at a good ratio and pace. This will require six cranial nerves innervating 60 voluntary and involuntary muscles as well as articulation of 22 bones connecting at 34 sutures (Smith, 2007). Treatment to restrictions in those muscles, joints, and cranial nerves can improve feeding function.

Red flags in feeding dysfunctions will impact post frenectomy recovery as the frenulum is only one structure connected to many others. Miller (2019) noted in a neonatal hospital study in 1986, disturbed suck patterns was related to intraventricular hemorrhage, length of labor, type of delivery, maternal anesthesia, low birth weight, low gestational age, barbiturates, and cocaine. Clinical experience and Miller also noted infants who have feeding dysfunction may also present with torticollis, stiff neck, preferred head position, TMJ dysfunction, hypotonia or hypertonia, tongue bundling, headache, sore neck, pain. Smith (2007) has noted unplanned caesareans increased feeding times.

Miller (2019) presented the mechanism of infant manual therapy as the release of pain reducing chemical with joint motion as reported by Bialosky et al. (2009). This targets the skeletal system, nervous system, myofascial/soft tissue. The mechanism can be as simple as a biomechanical re-alignment by skilled hands to help

structures affected by intrauterine constraints or the labor process. The ease of pressure on the joints and muscles promotes proper neuromuscular function. Another mechanism is via nervous system changes: when manual therapy provides relief of anatomical irritation, the central nervous system can adapt to reductions of chemical and neurological pain. Likely both mechanisms provide immediate results, as well as longer term effects.

Infant manual therapy techniques demonstrated include infant massage, cranial sacral therapy, joint mobilization, intra oral muscle/joint work. These techniques are based on an individual's training, profession and scope of practice in specific regions.

To make frenectomy procedures efficient for the infant/child as well as the dentist/doctor, a team including trained International Board Certified Lactation Consultant (IBCLC) and manual therapists such as a chiropractor, physical therapist, osteopath, massage therapist is ideal to rule out red flags and improve feeding. Assessments and treatments, before and after a frenectomy, helps maximize proper muscle and joint function. Effective positioning, latching and feeding of the baby promotes continued appropriate use of these muscle and joints. Maternal red flags are also presented as a barrier to recovery. These may include birth trauma and strains, excessive blood loss, previous breast surgery or hormonal issues affecting supply, as well as any medical conditions.

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Saturday, September 3

Plenary 5: What happens in Vagus ... How Our Tongue Function Shifts Us from Stress to Calm

Jenna Davis, DC, FIAMA

Baby Boom Creations /Acorn Family Health and Wellness Centre, Oakville, Ontario, CA

Abstract. The vagus nerve is the longest nerve in the body travelling from the brainstem, the neck, the thorax and into the lower abdomen. It is part of the

parasympathetic nervous system and it's responsible for the regulation of internal organ functions, controls mood, immune response, digestion and heart rate. In infants, the vagus nerve is associated with learning to swallow and digest food properly and also to be content, happy and calm. Our nervous system is primed for life while we are *in utero*. Vagal tone is impacted by the mother's prenatal stress but all physical, emotional and chemical stressors the infant is exposed to. Low vagal tone may present with symptoms similar to ankylofrenula. These infants may present with colic, reflux, high gag reflex, breast aversion, constipation, irritability, TMJD, mouth breathing, poor tongue function, food reactions and even poor sleep. Tongue movement and position has a huge impact on mood, posture, oral function, and longevity. When we rest our tongue on the roof of the mouth near the incisive papilla, it stimulates our vagus nerve, helps us release endorphins and calms tension. If there is restricted tongue function it could lead to a multitude of dysfunction and long-term health challenges. The best way to stimulate the vagus nerve is to establish good head position, cervical posture, tongue function, breastfeeding and exploratory oral motor play. There are many healthcare professionals focused on ankylofrenula but very few discuss the symbiotic relationship between tongue function, posture and vagal tone. We will explore assessment tools that measure vagal tone while also determining tongue function. Observation of the importance of head and neck posture is critical and we will review modifications and alternatives to stimulate the vagus nerve. Finally, we will discuss interprofessional treatment options, care plans and home exercises appropriate for all ages.

Broadening the Multi-disciplinary Approach in the Treatment of Tongue-ties

Tine Greve, IBCLC

Midwife/Breastfeeding Counsellor Bambus familieklinikk, Oslo, Norway, NO

Abstract. In Norway, healthcare professionals have had little knowledge about tongue-ties and their potential effect on breastfeeding. It is difficult for parents to navigate through the system to get help. When they find our clinic, they may have gone through weeks or months trying to get help. They become distressed and concerned about the wellbeing of their baby. A multi-disciplinary approach in the treatment of tongue-ties is recommended by UpToDate guidelines. Doctors, bodyworkers, SLPs, IBCLCs are involved in a good

practice for these children. The main focus is on the child's wellbeing and condition, where the parents need may be put in the background. Weeks or months of concern about breastfeeding problems, failure to thrive, and sleepless nights are taking a toll on the parents. In our clinic we have included a family therapist with breastfeeding competence in our team. Her role is to support and empower parents through the process from diagnosing, preparing for a tongue-tie release, and help and support through the rehabilitation process. We work closely together, having some of our consultations simultaneously evaluate the individual needs of each family. Including a family therapist has strengthened our team immensely. Body workers and IBCLCs can concentrate on clinical treatment as our family therapist can cover the care of the parents. Parents who have been empowered through this process seems to be more determined in the follow-up on after care. They get a confidence in themselves which may have been lost during the search for help where they may have been told off on the baby's problems. In our presentation we will focus on how a family therapist works with the parents together with the other disciplines in the clinic. By sharing our experiences, we hope that others will find inspiration for their own practices.

The Myths and Physics of Soft Tissue Lasers

Peter Vitruk, PhD, MInstP, CPhys

Founder, CEO LightScalpel Inc, Seattle, WA, U.S.

Abstract. This presentation reviews the reasons behind the success for *some* of the soft tissue lasers (i.e., their ability to cut and coagulate the soft tissue at the same time) in applications such as laser frenectomies and other soft tissue surgeries.

Summary

CO₂ laser wavelengths circa 10,000 nm are highly effective and spatially accurate laser beam vaporization tools with exceptional coagulation ability due to the close match between photothermal coagulation depth and the diameters of oral soft-tissue blood capillaries. Erbium laser wavelengths circa 3,000 nm are extremely energy efficient for tissue vaporization, however, their photothermal coagulation abilities are much limited. Unlike CO₂ and erbium lasers, the commercially available dental diodes are contact thermomechanical (non-laser) cutting devices with excessive coagulation depths.

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Airway, Breathing & Sleep Makes the Difference

Diana Batoon, DMD

Dentist, Center for Breathing & Sleep Wellness, Scottsdale, Arizona, U.S.

Abstract. What is the new healthy? Why are so many children and adults suffering from snoring, sleep apnea and respiratory conditions? As health care providers, how can we pivot and help educate the consumer, families and other health providers to make a difference? The increasing number of people who have a restricted airway, or unhealthy sleep can stem from several different areas. With a collaborative team and open mindset, we can treat our patients better and learn from everyone involved. Do the answers start from *in utero*, pregnancy, after birth or during the growth and development of a child? How can health providers manage or improve conditions involving airway, breathing and sleep? The answers to these questions and are complex and involve more than meets the eye. Learning from our colleagues and our patients can motivate clinicians to successful treatment. What does evidence-based research say about sleep, airway and breathing?

Malocclusions in Children and Obstructive Sleep Disordered Breathing: Connecting the Dots

German Ramirez, DDS, M.D.Sc, PhD, FRCD

Aurora Kids Dentistry, Aurora, Ontario, CA

Abstract. As it is known today, Sleep and Breathing Disorders may be associated to deviations in the Craniofacial Growth and Development. In this lecture, Dr. Ramirez will present insights of Craniofacial Growth

and Development to intercept developing malocclusions in children at a very early age. He will also put in context how developing a correct structure of the mouth gives the basis for producing a better airway. Therefore, this lecture will give you the basis to understand how a deviation in craniofacial growth may impact the airway in children, as well as to envision the importance of a myofunctional approach when intercepting a developing malocclusion at an early age, which may be associated with a sleep and breathing disorder.

Every Tongue Has a Body: An Interdisciplinary Approach to the Evaluation and Treatment of TOTs

Carmen Baker-Clark, IBCLC

Owner, Lactation Consultant, Breastfeeding Momma, Teaneck, New Jersey, U.S.

Giselle Tadros, PT, DPT

Physical Therapist, Oral motor Specialist, Developmental Specialist Milk Matters Physical Therapy, Jersey City, New Jersey, U.S.

Abstract. Infants with tethered oral tissue (TOTs) undoubtedly have multiple accompanying challenges. These can include colic, feeding difficulty, nervous system dysregulation, sensory processing difficulties, GI disturbances, musculoskeletal asymmetries, midline defects and primitive reflex integration issues. All these things have been found to challenge feeding, but equally importantly, negatively impact normal development. While releasing the restrictive sublingual frenulum alone can often improve some of the related functional challenges in infants, many times it does not completely resolve the problems. In fact, the frenectomy procedure often reveals the true weaknesses in oral and motor function. When infants cannot feed optimally, they compensate physically using excessive force with muscles of the head, jaw, face, neck, shoulders, often displaying fistled hands, tightly bent arms, with stiffness in the spine, hips and extremities. All these structures are connected and need to be evaluated together. Healthcare practitioners who work with tongue-tied babies should have a good understanding of how movement, and lack thereof, affects this specific population. The breastfeeding/feeding dyad requires a team of practitioners that work together on an effective treatment plan based on clear understanding of what each team member does in conjunction with the unique needs of the patient. Understanding normal feeding, and recognizing the compensations is just one of the roles of the IBCLC. Relaying observations of where the dysfunction may be stemming from to the (occupational,

physical or speech) therapist and release provider is fundamental in a successful multidisciplinary approach. The work continues as the therapist attempts to improve mobility, strengthen weaknesses, release stiffness and solidify muscle memory in preparation for the frenectomy. Clinicians need to collaborate and communicate together throughout the entire process to decide on the best timing of the pre-work and the release to maximize functional outcomes for the baby.

Infant Airway: Importance of Breathing for Feeding, Growth and Development

Rene Moore, IBCLC, CLE

Private Practice IBCLC/ First Food for Baby, Cave Creek, Arizona, U.S.

Abstract. This presentation is focused on infant airway as it relates to tongue-tie. Participants will learn to recognize subtle, unhealthy deviations from normal, healthy breathing, including general tongue presentation and breathing patterns (especially before and after tongue-tie release). This is important for many reasons but may be helpful in contributing to optimal frenectomy outcomes and avoiding regression. Additionally, the importance of identifying at risk infants to help avoid common misdiagnosis and labelling that is more often actually struggle with breathing and sleep will be discussed, all of which ultimately optimize breastfeeding outcomes and health for the human lifespan.

Plenary 6: Bodywork for Babies with Tethered Oral Tissues: What We're Really Treating

Carol Gray, LMT, CST, RPYT

Carol Gray LLC, Portland, Oregon, U.S.

Abstract. This session's presenter will convince you (if you're not already convinced) that babies with tethered/restricted oral tissues need bodywork. She will also explain why fetal and infant constraint cause most of the problems that infant body workers treat. Babies grow into available space before and after birth. When their space is restricted *in utero* they develop structural differences and dysfunctional movement patterns that limit future mobility and inhibit normal function. We call this fetal constraint. We're seeing an epidemic of fetal constraint in industrialized countries. Constraint *in utero* has maternal, fetal, cultural, anatomical and biomechanical origins. Seated occupations and seated lifestyle for pregnant people are major factors. So-called engagement is another factor. Widely accepted as normal, engagement is actually a pathological condition

that can adversely affect the birth process and subtly or overtly affect the condition of babies after birth. Fetal constraint has an adverse impact on labor, birth, and infant development. The problems caused by fetal constraint exacerbate feeding and other issues in all babies, especially those who have tethered/restricted oral tissues. The legacies of fetal constraint include labor induction, instrumental and cesarean birth, infant autonomic nervous system dysregulation, torticollis, plagiocephaly, breastfeeding difficulties, scoliosis and more. Some of the things we do after birth to prevent babies from moving (swaddling, infant furniture and container lifestyle) create new problems and perpetuate the fetal constraint issues established during gestation. Carol Gray will present some resources for how we can help - before and after birth. Hint: bodywork and movement factor heavily in the prevention and solutions to these problems.

Sunday, September 4

Using the Centering Model of Care in a frenectomy clinic

Jessica Altemara-Trent, IBCLC

Bliss at the Breast, North Carolina, U.S.

Abstract. An integrative frenectomy clinic has the potential to meet numerous needs, but also more moving parts. The Centering Model of care provides additional therapeutic value as well as efficiency for an integrative clinic. Hear about this evidence-based model of care being used as a holistic approach to treatment for families of babies being treated for oral restrictions.

An IBCLC, a Grandbaby and a Lingual Frenulum: A case Study

Renee Beebe, M.Ed., IBCLC

The Second 9 Months, Seattle, Washington, U.S.

Abstract. As an IBCLC in private practice, I often feel frustrated. By the time a dyad finds me or another IBCLC, the parents are feeling desperate due to a cluster of difficulties. They "have tried everything" and they are convinced the baby has a tongue tie because nothing else has helped. We confirm the connective tissue looks tight and give referrals. Maybe things get a little better. But I often wonder "What if they would have had excellent IBCLC/bodywork support in the first weeks after birth? What if they could have prevented the bleeding nipples, low milk supply and underweight baby? Would that procedure be needed?" As community-based IBCLCs we rarely get to prevent breastfeeding problems. But what

if we could? What if we could see those babies daily from birth. And frequently thereafter? What if the parents did exactly as we instructed? What if excellent manual therapy was available if needed. This is an IBCLC fantasy. This fantasy came true for me when my first grandchild came into the world. But it was more than a fantasy come true. It was/is an experience that has taught me more than I ever thought possible. It has challenged me and what I thought I knew. It has kept me awake at night. It has taught me how important home activities can be. This presentation chronicles the breastfeeding and oral/motor journey of a baby with a suspicious lingual frenulum while being followed ever-so-closely by the resident grandmother/IBCLC. I hope, like me, you will come away with more questions than answers.

Treat or not to treat: Speech outcomes in children with tongue-tie

Sharon Smart, PhD BSc CPSP FHEA

Senior Speech Pathologist & Lecturer Curtin University,
Perth, Western Australia, AUS

Holly Salt, SLP

Director and Speech Pathologist, Flourish Speech, Perth,
Western Australia, AUS

Mary Claessen, PhD, CPSP, FSPAA

Senior Lecturer Curtin University, Perth, Western
Australia, AUS

Abstract. Conflicting literature exists on the relationship between tongue-tie and speech production. This presentation will discuss current research on speech outcomes in children with tongue-tie, including the findings from our recently published paper (Salt, Claessen, Johnston, & Smart, 2020) [1]

Summary

Interest in tongue-tie has dramatically increased over the past decade [2]. Concurrently, there have been increased rates of tongue-tie procedures reported in the United States, Australia, and Canada [3,4,5]. Whilst evidence exists that frenotomy for tongue-tie can significantly improve breastfeeding outcomes with infants, literature on improved speech production outcomes is variable and conflicting.

The current study aimed to investigate tongue structure and function, speech production, and intelligibility ratings by parents and clinicians, tongue mobility and speech production in children with tongue-tie with and without surgery during infancy.

A total of 59 children aged two to four years participated in the study and formed three groups, those who had treated tongue-tie (TTT), untreated tongue-tie (UTT) and no tongue-tie (NTT).

Statistical analysis compared the difference between the percentage of consonants correct (PCC), parent and clinical intelligibility ratings, tongue mobility scores and current lingual frenulum function between the TTT, UTT and NTT groups. No statistically significant differences were found between TTT, UTT and NTT groups for intelligibility, tongue mobility and speech production measures.

This study provides preliminary evidence to assist clinical decision-making and suggest clinicians do not recommend and families to avoid surgical intervention for tongue-tie during infancy for the sole outcome of improving speech production later in life.

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Mount Fuji Symptom. A Quick Initial Assessment of Red Flags Associated with Oral Tethered Tissues for Parents and Professionals: Pilot Study Poland

Anna Kotlinska, PhD Candidate, MMid
Midwife/ Jagiellonian University, Poland

Breastfeeding is a biological norm but can be also extremely challenging for the mother-infant dyad, especially for babies with tethered oral tissues (TOTs). Mothers struggling with lactation difficulties can also experience great pain and feel misunderstood. A baby's short frenulum can cause early weaning and psychological trauma for the mother. Unfortunately, professional and complete tongue-tie evaluation is not available in every maternity hospital in Poland. Mothers

struggling with lactation issues often seek help on social media websites. Recently, social media also became a tool used for promotion of medical knowledge including lactation disorders and TOTs; a picture is worth a thousand words! Symptoms often associated with tongue-tie – mouth open during sleep, blisters, two line lips, low tongue posture, white tongue and others – were presented to parents and professionals using the example of Mount Fuji. The images of open mouth and Mount Fuji are very similar and easy to remember. Mothers are excellent observers and photographers of their infants. In this simple way, they can initially identify "red flags," ask for professional advice and speed up the diagnostic process. The aim of this presentation is to educate parents and professionals on the signals that may indicate TOTs.

Lip Ties, Buccal Ties, Eiffel Tower Ties, Oh My!

Brynn Leroux, DDS

Partner/Pediatric Dentist, Baton Rouge, Louisiana, U.S.

Abstract. This presentation will highlight lip ties, buccal ties, and Eiffel Tower ties in patients from birth to adolescence and the importance of releasing each one. Correlations between these tethered oral tissues and feeding and speech difficulties, dental and orthodontic issues, and more will be reviewed. Appropriate timing and necessity for each release will also be discussed.

By attending this presentation, learners will be able to (1) identify lip ties, buccal ties, and Eiffel Tower ties in infant, toddler, and adolescent patients; (2) correlate the relationship between soft tissue and their effects on feeding, speech, growth and development, dental health and more; and (3) differentiate between normal versus restrictive frenums and understand the indications for and ideal timing to release.

Ankyloglossia Plays a Role in Maxillary Arch Formation and Orthodontic Therapy Along with Wisdom Teeth Impaction

Preety Desai, DDS

Periodontist, Kamloops, British Columbia, CA

Abstract. Getting 'long in the tooth' is not an uncommon phenomenon in our ageing population. But indeed, ageing it is not the only reason. Receding gums are not necessarily a result of getting older but rather a tooth size/jaw size discrepancy. Lack of proper maxillary jaw development and expansion to its full capacity can be as a result of ankyloglossia restricting the muscular sculpting necessary. Orthodontic treatment to

compensate for the lack of tooth/jaw discrepancy and fit can only exacerbate this situation. All resulting in generalized gingival recession. Many of these patients are referred to the periodontist for extensive gingival grafting - all the while not diagnosing and understanding the initial etiology and thus predictive treatment. One case from beginning to end will be followed through.

Virtual Presentations

Ankyloglossia in Australia: Practices of health professionals

Donna Akbari, PhD Candidate, SLP

Speech Pathologist/Researcher University of Sydney, Sydney, AUS

Abstract. To investigate the practices of health professionals involved in ankyloglossia diagnosis and management in Australia. Methods: Questions pertaining to the clinical practices of health professionals regarding the assessment and management of ankyloglossia were asked to understand the current service-provision situation in Australia. A web-based questionnaire was electronically distributed to health professionals in Australia. Results: A total of 237 responses came from speech pathologists (40%), midwives (27%), pediatricians (8%), dentists (6%) and other professionals (19%). Most health professionals worked in metropolitan or regional cities (75%) compared to rural and remote areas (25%). Observation was the most frequently used assessment tool (72%), followed by informal screening tools (40%). Existing assessment tools were revised by 16% of health professionals. Surgical procedures were the primary treatment for 29% of health professionals with non-invasive treatments being used by fewer health professionals. The frequency of surgical procedures for the management of ankyloglossia was examined. Over half of health professionals performed 0-5 surgical procedures per month (63%), with some health professionals providing over 30 procedures per month (11.6%). Health professionals working in rural and remote areas had significantly lower confidence levels in the assessment and management of ankyloglossia compared to those working in metropolitan areas ($p=.001$). Conclusion: The diagnosis and treatment of ankyloglossia vary considerably across Australia and between professions. Standardized assessment and management practices are required. This study highlights the need for further research into how health professionals working in rural and remote settings can be

supported in their clinical practices to improve confidence.

Birth, Airway, TMD and Cranial Osteopathy

Tasha Turzo, DO

Osteopathic Physician/Turzo Enterprises, Santa Cruz, CA, U.S.

Abstract. Integrative tongue function is critical to optimize facial growth and development. The growth of the face in an anterior/inferior direction from the cranial base creates a space, called Airway, between the posterior margins of the tongue and the anterior cervical fascia. This space, Airway is surrounded by collapsible soft tissues, which are dependent on the muscle and tone of the tongue and soft palate. Birth injuries can compromise the innervation and motor function of the tongue and muscles of the soft palate, which can affect the development of the face. Birth injuries, such as torticollis, often create temporal mandibular dysfunction as the face grows. The stability of this joint is a crucial component of optimizing airway space during sleep. Learn the questions to ask and physical exam to screen for our patients who are at risk for a sub optimal and compromised airway. Learn the early interventions to help redirect facial growth and development. Learn how to diagnosis and the basics of treatments for TMD. Learn about Cranial Osteopathy and how manual medicine can help to optimize facial growth and development.

Comparative Evaluation of Scissor versus Laser Frenectomy in Infants with Breastfeeding Issues: A Multicenter Retrospective Clinical Analysis of 150 Cases

Effath Yasmin, IBCLC, BCST

Founder/director Nourish & Nurture, Mumbai, India

Abstract. Frenectomy is a simple procedure done to relieve ankyloglossia in infants with breastfeeding issues. The surgical procedure can be carried out using traditional method of using scissors or through lasers. To compare the effectiveness of scissor frenectomy and diode laser assisted frenectomy based on clinical and healing outcomes.

The current study will be carried out as a retrospective clinical analysis of 150 cases. A total of 150 infants with mean age of 40 days were treated for breast feeding issues due to ankyloglossia at three different centers. For Fifty percent of the cases conventional method of scissor frenectomy were performed and the lasers were used for the other half. Clinical and healing outcomes were measured using pain scale, bleeding severity and wound

healing. Recall visits were done at one, 7 and 30 days post procedure.

The outcome measures of all the 150 cases will be analyzed and compared using statistical tests with p value set at 5%. Mann Whitney U tests will be used for inter-group comparisons and Friedmans test will be employed for intra-group comparisons.

The result of the study will help us understand if there is any significant difference between both the surgical methods employed for infant tongue tie release procedure.

Fortunate to Have the Service: Women's Experiences of Breastfeeding a Baby with a Tongue-tie

Louise Duursma, PhD Candidate, RN, IBCLC

PhD Candidate Western Sydney University/Nurture Breastfeeding Support, Sydney, AUS

Elaine Burns, RM, RN, PhD

School of Nursing and Midwifery Western Sydney University

Kim Psaila, RN, CNM, NIDCAP

School of Nursing and Midwifery Western Sydney University

Donna Solari, IBCLC

Maternity Unit, Centenary Hospital and ACT Health Services

Monica Hogan, IBCLC

Staff Development Unit, Canberra Hospital and ACT Health Services

David Todd

Neonatal Unit, Centenary Hospital and ACT Health Services & ANU Medical School Canberra ACT, Australia.

Abstract. This study examines women's experiences of infant feeding and tongue-tie in a setting where there are clear clinical pathways for the assessment and treatment of this condition. In depth interviews with 12 women revealed an overall positive experience at the study site and they felt fortunate to have the service.

Summary

Several studies have described women's experiences of breastfeeding a baby with tongue-tie, and often describe an 'arduous' journey for women trying to find answers (Edmunds et al., 2013; Muldoon et al., 2017; Ray et al., 2019; Unger et al., 2020; Wakelin et al., 2017; Waterman et al., 2020; Wong et al., 2017). The

Centenary Hospital for Women and Children (CHWC) in Canberra Australia has been assessing and performing tongue-tie releases since 2006, and has clear clinical guidelines and pathways for the assessment and treatment of babies with a tongue-tie when there is a breastfeeding problem (Todd, 2014).

The aim of this study was to understand women's experience of breastfeeding a baby with a tongue-tie where assessment and treatment of tongue-tie is part of standard newborn care. With ethics approval, in July and August 2020, text message invites were sent to women who had been reviewed with their baby by the CHWC Tongue-tie Clinic in 2019. Twelve in depth interviews of up to one hour, were conducted over the telephone or internet. The qualitative interviews were transcribed verbatim, and a thematic analysis was performed using NVIVO and the 6-stage approach suggested in Braun and Clark (2020).

Overall, women provided an understanding of their real-world experience of what it is like to breastfeed a baby with tongue-tie. Women interviewed expected to breastfeed their baby and some had attended antenatal breastfeeding classes and expressed colostrum during pregnancy. They expressed disappointment when the establishment of breastfeeding did not happen as they expected, and some discussed that the pain and difficulties with breastfeeding affected their ability to bond with their baby. Studies have found that difficulties when establishing breastfeeding if not addressed early can affect the relationship between the mother, baby, partners and other children and make the mother more prone to depression (Levkovich et al., 2017; Ray et al., 2019; Wakelin et al., 2017).

Although studies have reported nipple pain being a key symptom that improved after a tongue-tie release (O'Shea et al., 2017), the women in this study also reported weight loss and inability to effectively latch to the breast as some of the early signs that the baby's tongue-tie was affecting feeding. They described a positive experience with their baby's tongue-tie being picked up and treated early, with some being released before they left hospital, this is a contrast to other studies that reported long delays and conflicting opinions (Edmunds et al., 2013; Muldoon et al., 2017). Although some mothers found the tongue-tie release procedure to be distressing, most found that it was quick and improved breastfeeding. Women discussed the importance of being listened to by staff when they said something was "not right" and appreciated the clear pathways for assessment and treatment. The use of

assessment tools and diagrams were described as helpful to inform decision making.

Women who were interviewed for this study have described positive experiences of tongue-tie assessment and treatment, which is in sharp contrast to descriptions by women in other studies where assessment and referral are not part of standard care. This suggests the need for clear guidelines and skilled staff for the assessment and management of babies with tongue-tie and problematic feeding.

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Integrating tongue-ties into your office with long-term success

Richard Baxter, DMD, MS

Pediatric Dentist Alabama Tongue-tie Center, Pelham, Alabama, U.S.

Abstract. Utilizing a team-approach and best practices, the attendee can help their patients thrive and achieve optimal outcomes for a lifetime. Dr. Baxter will share the knowledge, successes, and struggles from his practice, and experience in treating thousands of patients with these conditions. This lecture should be beneficial for each team member and provider looking to further their knowledge of oral restrictions.

Lingual Frenulum: Changing Paradigms

Roberta Martinelli, PhD, SLP, CEFAC

Health and Education, Sao Paulo, Brazil, BR

Abstract. For years, ankyloglossia was underestimated by most health professionals. Over those years, many paradigms were created. It is necessary to change these paradigms to understand the importance of evaluating the lingual frenulum for early diagnosis and treatment of ankyloglossia. The limitation of tongue movement caused by ankyloglossia interferes, to a greater or lesser degree, with the functions of sucking, swallowing, breathing, chewing, and speaking.

Spontaneous Correction of Retrognathic Mandible: Case Series

Shifa Shamsudheen, DDS

Pediatric Dentist We Little, Mylapore, Tamil Nadu, India

Abstract. Retrognathic mandible is generally considered a self-correcting anomaly in infants wherein breastfeeding acts as a post-natal prophylaxis for optimal mandibular growth and cranio-facial development. The posture of the tongue and its range of motion largely regulates the growth of the mandible during breastfeeding. Ankyloglossia is a congenital oral anomaly with short lingual frenulum which restricts breastfeeding process resulting in failure of self-correction of retrognathic mandible. In this case series, spontaneous re-correction of the mandibular position and tongue posture has been demonstrated post frenectomy in three infants. The infants reported with chief complaint of breastfeeding issues and sleep disturbances. On examination the tongue tie and lip tie were identified.

Frenectomy was performed after pre-operative optimization of glossal muscle function through myofunctional exercises. On achieving adequate muscle tonicity, frenectomy was performed. Tongue posture correction was observed immediately post procedure in all the infants. Post-operative myofunctional therapy along with established uncompensated breast feeding led to spontaneous correction of the retrognathic mandible in the recovery phase. There is a dearth of evidence in Literature on retrognathic mandible in infants as it has been largely overlooked as a self-correcting anomaly even in cases of ankyloglossia in the past. The current case series brings to light the role of tongue in establishing this natural correction to happen. This case series also iterates us that a simple frenectomy procedure can reignite the natural growth process in infants and prevent future oral malocclusions and other related disturbances.

Research Workshop: A CIREAS-ly Easy Guide to Start Research in your Practice

Sharon Smart, PhD BSc CPSP FHEA

Senior Speech Pathologist & Lecturer Curtin University, Perth, Western Australia, AUS

Raymond J. Tseng DDS, PhD^{1,2}

¹*Adjunct Faculty, Dept. of Pediatric Dentistry, Adams School of Dentistry, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, U.S.*

²*North Carolina Tongue Tie Center, Cary, North Carolina, U.S.*

Summary

Attendees will work together to define needs and collaborative principles for future endeavors regarding care surrounding ankylofrenula.

During this session, attendees will participate in discussion to identify opportunities and priorities for the newly formed Committee for Interprofessional Research, Education and Ankyloglossia Science (CIREAS) committee.

Attendees will participate in a fast-paced collaborative workshop to translate that clinical issue/idea into a realistic and achievable research project, in the form of a 'Research Plan on a Page'.