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Resident Voice
In ‘normal’ times, this space is reserved for commentary by the Chapter’s President. Clearly, we are not in normal times and therefore in lieu of Dr. Weller’s column, the last of his 2-year term, we have chosen instead to honor him with a short reflection on his stewardship.

In 2018, while serving as Vice President, Dr. Alan Weller worked closely with then Chapter President, Jeff Bienstock, to prepare for his ascent into the role of Chapter President; a path many past vice presidents have followed since the founding of NJAAP. However, unlike all past presidents, Dr. Weller’s term would prove to be unique in ways no one could have predicted.

While much of his first year was similar to that of previous terms, serving as the face of the organization and guiding the Chapter through major annual events and activities including the 9th Children’s Ball, Annual Conference, School Health Conference, authoring opinion pieces for state and national newsprint, engaging with members to understand their needs and serving in the dual role of President and Co-Chair of the Government Affairs Committee- liaising with legislators to convey positive messaging relevant to comprehensive culturally-centered child health issues.

To all of you, Stay Safe and Be Well.

To Dr. Alan Weller, thank you for your tireless efforts and support.

Three Unforeseen Events that Changed Everything.

i. The Chapter’s next chapter - In April 2019, the Chapter’s long-time CEO, Fran Gallagher announced her resignation. This triggered an extensive seven-month, comprehensive search in pursuit of a qualified candidate who would lead the Chapter and lead NJAAP into the next phase of growth. Through all the meetings, phone calls, interviews and updates, Dr. Weller kept the process moving forward. And in December of 2019 the Executive Council selected Felicia K. Taylor, to serve as the Chapter’s next CEO.

ii. Vaccine legislation and the anti-vax onslaught - In December 2019, Dr. Weller and fellow colleagues provided testimony in support of tightening the religious exemption from school required immunizations. In March 2020, COVID-19 surfaced and changed the course of our daily lives, the economy, and life as we know it. NJAAP has remained strong in the wake of the pandemic. In May 2020, NJAAP membership rose to an all-time high of 1,800 members, which is due in part to enhanced services and resources provided to pediatricians throughout the state. With Dr. Weller’s guidance and leadership, the Chapter has engaged in multiple efforts to keep members informed of real-time clinical strategies to provide the best care for children and families. This story continues to evolve.

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The President’s Column
Alan Weller, MD, MPH, FAAP
President, NJAAP

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Moving Forward during extraordinary times

COVID-19

As I reflect on my first 90 days with NJAAP, no one could have predicted the life-altering experiences we face today. From anti-vaxxers storming the state house in Trenton, to a global pandemic, these are certainly extraordinary times. We will work through most of these challenges, but not without learning more about ourselves and our communities. NJAAP is working diligently behind the scenes to provide you with the support you need to manage and operate efficiently during this pandemic. You can rely on us to provide you with the connections and resources necessary to provide optimal care to the patients and communities you serve.

Over the past month, NJAAP has provided timely webinars, Q&A sessions and online resources to help navigate your questions or concerns. Please continue to let us know if there is anything else we can do to help you better serve patients and protect you on the front lines. Simply submit your questions to covid@njaap.org and we will provide you with a timely response. This spring NJAAP launched a telehealth component of the Collaborative Behavioral Health Care Program to expand the scope of hard to reach or remote patients who may not be as mobile. Given the recent events related to COVID-19, the telehealth option is a timely and effective way to provide service to children who may be affected behaviorally by social distancing, virtual and home based learning. If you are not part of the collaborative please be sure to sign up at https://njaap.org/programs/mental-health/ccp.

Medical Director’s Column

Steven Karry, MD, MPH, FAAP
Medical Director NJAAP

NJAAP in the midst of the pandemic

These past months and the months to come are transforming child health care throughout the world, and especially in this sector of the United States.

I know there are many children living lives of quiet desperation now, clustered in homes and apartments and hotel rooms with parents and family members, dealing with partner violence, ever increasing stress, no longer working, with limited resources and often few social supports.

I know there are children with chronic conditions and children with acute condition that are not being seen. Immunizations are more and more delayed, especially for children older than two.

I know there are pediatric practices that are owner operated and not supported by one of the large systems in the State. I know and fear that even with the time limited support from the federal government, some of these practices do not have the resources to continue.

I also know that this pain will not ease overnight and that we will all be living some version of this altered reality for many months to come, perhaps throughout much of 2021.

So we need to work together to ensure that we transform as effectively and safely as possible. But we need to transform.

I can not see us one day magically returning to business as usual. Many of the concepts that have been encouraged in the recent years: population health, shared care with specialists, increased evidence based screening for mental health, social determinants of health, substance use, integrated care management and coordination with community child health organizations, and certainly now Telehealth - these will all be themes promoted by Medicaid, by commercial insurance, by managed care and health care systems.

NJAAP has become an even more important support in these times. One place for support and education and advocacy for both children and the pediatricians in the State, especially those in private practice. NJAAP will continue to transform its services and priorities based on your needs and the needs of the children and families in NJ.

Please let us know of any ideas, any barriers, any new approaches that you are working on.

Executive Directors’ column continued

Please join us on an evening of networking and help us honor our awardees. Reserve your ticket today.

Our annual conference has been rescheduled to November 18, 2020 at the Palace in Somerset. This year the conference will feature topics such as vaping, scoliosis, gun safety, infectious disease updates and more. Be sure to sign up for one or two of the quality workshops conducted by renowned speakers on topics such as atopic dermatitis, child safety, recurrent abdominal pain, breastfeeding strategies and more. Don’t miss an opportunity to earn up to 7 MOC part 2 points!

Advocacy

NJAAP is meeting regularly with Senators and Assemblymen and the Governor, some of these practices do not have the financial and fear that even with the time-limited support from the federal government, some of these practices do not have the financial

The Census can impact our federal and state funding for important programs such as Medicaid, Head Start, schools, hospitals and more. Furthermore, it helps to determine New Jersey’s number of seats in the house of representatives and the number of votes in the electoral college as well as voting district boundaries. Visit https://2020census.gov for more information.

Every sector of our lives has been impacted by this pandemic; therefore, it is prudent to stay armed with knowledge during this changing environment. Remember to visit our website for regular updates or contact us at njchapter@njaap.org. We urge you to follow the CDC, DOH guidelines and advice from infectious disease experts and other reputable healthcare providers to help minimize the spread of communicable diseases. Your professional organization is here to help you navigate through these uncertain times. Please let me know how we can be of further assistance to you.

We are all one voice for children and it is through our collective efforts that we can create a safe and healthy environment for New Jersey’s children and families.

Jeffrey Bienstock, MD, FAAP
Formal screening for autism in the primary provider office is recommended according to AAP guidelines regarding ASD screening:3 It is important to be aware that Pervasive Developmental Disorder (PDD) and Asperger syndrome are no longer recognized as separate diagnostic entities. There is large variation in symptom presentation and severity across individuals with PDD, with many individuals with PDD also having co-occurring psychiatric disorders.6 7 One study found that most children with PDD have at least one co-morbid psychiatric disorder.7 Autism spectrum disorder (ASD) represents a constellation of features including social deficits, repetitive behavior and sensory processing that is present at any age.1 8

Introduction

Given NJ’s high prevalence of Autism Spectrum Disorder (ASD), 1:34 children and 1:2 2-year-olds³⁴, it is likely that nearly all pediatricians in NJ have patients with ASD in their practice. The core features of ASD may pose communication, behavioral, social and sensory challenges during office visits, yet there are simple strategies that can help pediatricians best address the needs of patients with ASD and their families, and also help office staff feel more comfortable working with these children.

Features of ASD

There are indicators that children show signs of autism as early as 6 months of age.³ Red flags include lack of response to name at 6-12 months, lack of pointing or gesturing to share interest, and/or lack of single words. In 2013, DSM 5 updated the diagnostic criteria. It is important to be aware that Pervasive Developmental Disorder (PDD) and Asperger syndrome are no longer recognized as separate diagnostic entities. There is large variation in symptom presentation and severity across individuals with PDD, with many individuals with PDD also having co-occurring psychiatric disorders.6 7 One study found that most children with PDD have at least one co-morbid psychiatric disorder.7 Autism spectrum disorder (ASD) represents a constellation of features including social deficits, repetitive behavior and sensory processing that is present at any age.1 8

Medical Conditions

Children on the autism spectrum have the same medical conditions as their otherwise typically developing peers. However, these medical disorders may be more difficult to diagnose in children with ASD due to deficits in communication. Children with ASD may present with sensory input that is different from what is normally seen.9 There is a high prevalence of gastrointestinal and sleep disturbances in children with ASD.8 10 Gastrointestinal disorders and sleep disorders are the most common co-occurring medical conditions in children with ASD. The co-occurrence of these disorders in children with ASD can contribute to symptoms of co-occurring psychiatric disorders.7 Seizure disorders develop in 7–14% of children with ASD, with complex partial seizures being the most common. Seizures commonly occur in early childhood and adolescence. Seizure disorder should be considered in children with ASD due to the underlying core symptoms of ASD. With core symptoms of ASD, the child may present with behavioral and emotional problems which may impact patient and caregiver satisfaction and may impact health outcomes in this population.9 10 In addition, healthcare professionals may not feel comfortable treating patients with ASD, citing insufficient training, lack of knowledge and competency, and challenges communicating with individuals with ASD.11 12 Several strategies have been developed to encourage positive medical interactions with children with autism and their families. To ease the stress of the encounter for both emergent and scheduled visits, the National Institute for Health and Clinical Excellence (NICE) in the UK developed guidelines for the admission and management of patients with ASD.¹ One strategy is the use of a patient passport.² The patient passport specifies preferences, skills, challenges and supports needed in a single document to help providers understand and accommodate individual needs.21 Involving the patient in the creation of a patient passport also promotes health-related self-advocacy.

CME Activity

Is Your Practice Prepared for Patients with ASD?

The most commonly reported sleep disorders in children with ASD are problems with sleep onset, sleep maintenance and sleep duration. Sleep deficits may present as behavioral problems and cognitive deficits during the day.¹ A detailed history is beneficial in helping the family modify the bedtime routine. Electronics at bedtime should be discouraged. A regular bedtime routine with sleep hygiene strategies can be helpful. The assistance of a Board Certified Behavior Analyst (BCBA) may also be useful with help with behavior modification. It is also important to consider that common medical problems as well as pharmacologic intervention melatonin can be effective at facilitating sleep onset but may not help with maintaining sleep. Pharmacologic intervention may be warranted. Studies have suggested clonidine at low dose before bedtime may be effective.¹ The prevalence of gastrointestinal disorders ranges from 9–70%. Gastrointestinal disorders may present with self-injurious behaviors, sleep problems and other atypical symptoms.¹¹ One systematic review shows that children with ASD had higher rates of gastrointestinal problems compared to children with other developmental disorders and typically developing children. In addition, the two most common conditions are constipation and chronic diarrhea.¹²

Mental Health Issues

Psychiatric disorders and behavioral problems are common in children diagnosed with ASD. Recognizing co-morbid psychiatric conditions is important in allowing for more direct treatment, which can help overall functioning of the child and family. Co-morbid psychiatric disorders can be difficult to assess in children with ASD due to the underlying core symptoms of ASD. Children with ASD often struggle with communication and have difficulty recognizing emotions and impaired theory of mind. Children with ASD may present with behaviors that are not typically thought of as common diagnostic symptoms of a disorder. For example, a child with ASD may present with anxiety and behavioral meltdowns which may impact patient and caregiver satisfaction and may impact health outcomes in this population.¹ One strategy is the use of a patient passport.² The patient passport specifies preferences, skills, challenges and supports needed in a single document to help providers understand and accommodate individual needs.21 Involving the patient in the creation of a patient passport also promotes health-related self-advocacy.

Mindfulness and Cognitive Behavioral Therapy

Mindfulness and Cognitive Behavioral Therapy (CBT) is often helpful for children with ASD and ADHD. Starting with methylphenidates at lowest doses is recommended, keeping in mind children with ASD and ADHD may experience more irritability from the stimulants. It is necessary to monitor closely.

Anxiety disorders are also a common psychiatric co-morbidity in children with ASD. Social Anxiety Disorder and Generalized Anxiety Disorder are among the most common, with a prevalence estimated to be between 42–56%.¹² The second most common is OCD, found in 37% of children with ASD.¹ It is important to recognize the distinctions between OCD and symptoms consistent with an ASD diagnosis. Children with ASD often have repetitive and perseverative behaviors that are often rewarding and voluntary. Compulsions associated with OCD are unwanted and stressful.

STRATEGIES TO IMPROVE THE MEDICAL VISIT

While medical visits may be difficult for all children, they can be especially challenging for children with ASD and their families. Unfamiliar faces, sensory sensitivities, and long wait times can make routine visits stressful for children with ASD and their families.¹⁵

The physical exam and challenges with ventilator sensations and body awareness, abrupt transitions, and difficulties with language processing can complicate medical visits further.¹³ ¹⁴ When the medical visit is stressful to the child, not only may that visit be difficult, but the child may anticipate future medical visits with anxiety and behavioral meltdowns which may impact patient and staff safety.¹² For example, medical procedures may be disrupted, the child may attempt to leave the office, engage in self-injury or aggression toward others. These difficulties often affect patient and caregiver satisfaction and may impact health outcomes in this population.¹³ ¹⁴ In addition, healthcare professionals may not feel comfortable treating patients with ASD, citing insufficient training, lack of knowledge and competency, and challenges communicating with individuals with ASD.¹¹ ¹² Several strategies have been developed to encourage positive medical interactions with children with autism and their families. To ease the stress of the encounter for both emergent and scheduled visits, the National Institute for Health and Clinical Excellence (NICE) in the UK developed guidelines for the admission and management of patients with ASD.¹ One strategy is the use of a patient passport.² The patient passport specifies preferences, skills, challenges and supports needed in a single document to help providers understand and accommodate individual needs.21 Involving the patient in the creation of a patient passport also promotes health-related self-advocacy.
THE ROLE OF CARE COORDINATION IN THE MEDICAL HOME FOR CHILDREN WITH ASD

Despite research demonstrating the efficacy of the medical home model in the primary care setting, studies have found that children with ASD are less likely to receive care in a medical home than children with other developmental disabilities.\(^{18}\) Caring for children on the autism spectrum includes not only careful monitoring for medical and mental health issues that may be overlooked, but also monitoring educational progress, advocating for evidence based services, providing guidance about unproven therapies and helping children and their families cope with transition from pediatrics to young adulthood.\(^{22}\)

A care coordinator plays an essential role linking families with these services and supports. The American Academy of Pediatrics Policy Statement on patient and family-centered care stresses the importance of patient and family centered care that is planned, proactive and comprehensive, promoting self-care skills and independence. Improved technology with electronic medical records and patient portals allow for greater ease of collaboration among patients and parent access to information.\(^{23}\)

TransitiOning AgeNcy To AdultHOod

- **One particularly important area of coordination and collaboration is during the time of transition from adolescence to young adulthood.** Assisting the adolescent and family is not just about making sure they have a adult physician. It often involves orchestrating complex medical/mental health issues, reviewing educational programming to ensure functional skill development, vocational planning that is realistic to the individual’s functioning level and providing guidance about medical legal issues such as guardianship, power of attorney and setting up trusts. It can be difficult to find the right people to access these activities. Providing agencies and following up can facilitate the process.
- **In New Jersey, Autism New Jersey provides resources, referrals and guidance directly to families.** The NJ Children’s System of Care - Developmental Disability Unit can provide needed resources and training of activities of daily living for some families.

The American Academy of Pediatrics clinical report on health care transition provides guidelines for transitioning all adolescents.\(^{16}\) Interventions found to be successful for adolescents with ASD include: a written medical summary from the pediatrician to give to the adult or primary care physician, providing a transition plan for the family with a list of available adult providers, coordination of care and communication between pediatric and adult physicians, a transition specific appointment to discuss the issues with the individual and family, and use of a checklist to track transition progress.\(^{25}\) Longitudinal care provides a unique opportunity to partner with families. Although caring for children with autism spectrum disorder can require comprehensive care, it is very gratifying to build a relationship with a family, and impact their development in positive ways. The goals of care coordination in the primary care setting include early identification and advocating for appropriately intensive interventions to improve functional outcomes.

**References**

1. Asperger syndrome is no longer an accepted diagnostic term. True  False

2. Children should be formally screened for ASD in the primary office at a. 18 months  b. 24 months  c. Both 18 and 24 months  d. 18 and 30 months

3. Seizure disorders are more common in children with ASD who have lower cognitive functioning. True  False

4. An 11 year old girl with ASD presents with increasing behavior difficulties including self-injurious behaviors, sleep problems and angry outbursts. What medical condition should be considered? a. Asthma  b. Gastroesophageal reflux  c. Hyperthyroidism  d. Seizures

5. An 8 year old boy in 3rd grade with high functioning ASD presents because of teacher complaints of student calling out during lessons, not completing his work and poor test scores. He has been diagnosed with co morbid ADHD but, has been fine in school previously. He is classified through the CST and receives supports. What is the next step?  a. Recommend a smaller class with more teacher asistance  b. Discuss a trial of stimulant medication  c. Refer for counseling  d. All of the above

6. What is an example of adapting the medical office environment for a patient with ASD? a. Reduce use of fluorescent lights  b. Use cloth instead of paper gowns  c. Offer the first appointment of the day  d. Offer the last appointment of the day  e. All of the above

7. What are some ways of adapting communication when working with patients with ASD? a. Use slang  b. Speak louder  c. Allow more time for processing language  d. Make sure patient is making eye contact before you give directions

8. Which is an advantage of using a patient passport? a. Helps patient transition from waiting room to exam room  b. Helps identify patient's preferences  c. Lists patient's IEP goals  d. Translates common medical terms into other languages

9. It is important to discourage self-stimulatory behaviors on patients with ASD. True  False

10. Which strategies are recommended to promote transition to adulthood for teens with ASD? a. Using a checklist to track transition progress  b. Providing a written medical summary give to the adult physician  c. Having a specific transition appointment to discuss issues  d. All of the above

CME Instructions
Read the CME designated article and answer the Spring issue, quiz questions above. Print your name and phone number and mail or fax the form within six months from the date of issue to: NJAAP CME Quiz, 50 Millstone Road, Bldg. 200, Ste. 130, E. Windsor, NJ 08521 • Fax: 609.842.0015

NAME ___________________________  PHONE ___________________________
EMAIL ___________________________

Submitter must answer 8 of the 10 questions correctly to qualify for CME credit

Accreditation Statement:
This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Medical Society of New Jersey through the joint providership of Atlantic Health System and the American Academy of Pediatrics, New Jersey Chapter. Atlantic Health System is accredited by the Medical Society of New Jersey to provide continuing medical education for physicians. Atlantic Health System designates this live activity for a maximum of 1.0 MRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
Early Emotional & Social Development: An Overview for Pediatricians

Richard Selmnick, Ph.D.
Psychologist/Nationally Certified School Psychologist
Director: Cooper Learning Center
Department of Pediatrics/Cooper University Health Care

When it comes to allaying parent anxiety about their children, pediatricians are on the front line, perhaps unlike any other professional group. Unlike other specialists that are asked to comment on their own particular area of expertise (e.g., vision), pediatricians are asked questions concerning a child’s, neurobiological development, school functioning, behavior, emotional/social development and day-to-day medical issues.

Underneath most parental concerns brought to the pediatrician, is the larger question and anxiety as to whether something of concern is “normal” or not, as in “Tell me to straighten, Doc. Is this (what ever it is) normal or not?”

An area of concern that pediatricians are often asked to comment on is whether a child’s emotional/social development is within the range of normal or abnormal. It is very difficult to make absolute statements regarding development from birth through age three, certainly “red flags of concern can be identified and explained to parents so that they can better keep developmental norms in mind.

In this piece we will be focusing on the aspect of emotional development and what to expect from birth through age three.

“Normal,” the Lens With Which We See Things

Normal is a word that is casually used in everyday language. This becomes somewhat problematic as the word then loses some meaning as people will say “Oh, that’s normal,” about virtually anything.

When it comes to development it is best to keep in mind a “bell-shaped curve” perspective, which can also be easily and graphically explained to parents.

With this perspective, “normal” means that approximately 70% of the people (children) are expected to fall between +1 to -1 standard deviation points on the curve for any given trait, including concerns about development (see curve below). Outliers beyond the norm are by definition much rarer.

Showing the curve to parents helps to explain “normal” in visual terms so you can see that it really is a relatively small number of children (about 15% expected) to be considered beyond expected or “normal.”

Emotional Development

When considering emotional development from approximately birth through age three, it is very important to keep in mind that there are so many interacting variables impacting development. Variables such as the family system’s functioning, socioeconomic considerations and basic medical factors interact in a pie chart of variables that affect development.

Emotional development refers to:

“The ability to recognize, express and manage feelings at different stages of life and to have empathy for the feelings of others.” 1

Birth through 3 Months

Considering emotional development in the first few months, qualities observed and noted include an interest or response to social interaction and stimulation along with being comforted by people familiar to the baby. Physical interactions lead to positive responses to touch and the capacity to be comforted by someone familiar. Laughter emerges more consistently from approximately three to four months of age.

Infants who are non-responsive to touch or who do not show signs of social smiling as the child moves into the next phase of development, need to be monitored closely, as not smiling, for example would represent an outlier variable using the “bell-shaped curve mentality.”

Three to Six Months

A child in this range is typically making great strides, socially and emotionally. Already showing signs that the infant can start “reading the signals,” differences between and among people based on how they look, feel and sound being taken hold in the infant’s perceptual field.

Within this period, the child takes great strides in differentiating a sense of self, as the baby starts becoming aware of his/her own name and seeing oneself in relation to other babies. Familiar faces are recognized and greeted with warm, social smiles.

A child showing the opposite of these emotional variables of social and familial connectedness would certainly be viewed as outside the norm. Certainly, making too many “down the road” projections based on the child’s lack of responsiveness, need to be done cautiously. However, consulting a developmental pediatrician may be in order in this range or into the next developmental period if concerns continue.

Six to Nine Months

Within this range, the child’s emotional repertoire broadens considerably. It is important to reiterate that it is very difficult to make absolute statements regarding development from birth through age three, certainly “red flags of concern can be identified and explained to parents so that they can better keep developmental norms in mind.

Children beyond ranges of expected levels of development are those showing much more of a limited emotional range and a fundamental inability to understand others’ social cues. As noted in earlier stages of development, questions may be raised in parents regarding emotional development with the concern that the child may be showing signs of a disorder such as autism or related concerns of social functioning.

Pediatricians would do well to educate parents regarding common expectations in this phase, while not being definitive regarding a diagnosis. As suggested earlier a consultation with a development pediatrician may be in order, depending on a number of different factors such as the parents basic resources for pursuing such a recommendation. Minimally, pediatricians can talk to parents about “red flags of concern regarding social/emotional development with the notion of watching the child closely.

24-36 Months

The child has come quite a distance since its early beginnings of infancy. Social and emotional competence are often tested daily in early childhood centers, preschool or play groups. show children may not want to readily share, parents and other caregivers can model sharing while being clear and labeling the value of sharing. Similarly, cooperating and following basic rules in home and in social/school situations becomes a central focus.

It is within this period of time that emotional temperament becomes much more crystallized. While the child is certainly still in flux regarding emotional and personality style, themes emerge and are often remarkably consistent over time. Perhaps the most predominant temperamental style is the one that can be identified on a continuum of flexibility on one side to more rigid and inflexible on the other.

With children who are flexible of temperament, they typically manage “curveballs” or other requests of them. Take Andrew, a child who is a little past his third birthday and in a preschool classroom. During free play Andrew is contentedly playing with different building blocks, stacking them into rudimentary buildings. No one interrupts Andrew’s playing and he does not intrude on others.

When the teacher good naturedly announces that it is time to put their toys away and get ready for lunch, Andrew shows no signs of being ruffled or bothered. Effectively, Andrew “goes along with the program,” and starts to put his blocks in the container. Parent reports have noted similar signs of his being fairly flexible of temperament and not seen as particularly challenging.

Like all children of his age range, Andrew will have his moments of expressed upset and displeasure, largely he can be counted on to follow directions, commands and requests. Similarly, Andrew is also seen as being a child who largely gets along with others, showing basic cooperation and sharing in his manner of interacting during play.

12 - 18 Months

As the baby moves beyond its first birthday, its emotional range and repertoire are quite sophisticated. ‘There is a push for independence that may not be fully recognized by caregivers as a baby’s desire to do things more on his/her own. Exerting independence becomes more of a norm. Emotional attachments become solidified within this period. Basic social skills are shown and there is increased social reciprocity. Signs of jealousy may be shown as primary caregivers give attention to someone else other than the baby.

It is also in this phase where language development fully interacts with emotional and social development. For a child whose language functions are developing adequately, expressing basic need in one word phrases and seeing how caregivers and others around the child respond, builds bonds of trust and increased personal confidence.

18 - 24 Months

While the child cannot understand another’s point of view within this stage, social and emotional functioning within typical expectations emerge, as the baby starts to experiment with personal assertiveness.

The young toddler is able to understand simple rules and there are indications showing signs of cooperative play and sharing, even though these traits do not fully emerge in this range. The toddler starts to imitate others and there is increased recognition of someone other than yourself.

It is in this period that the baby explores its world with increased enthusiasm and vigor. Emotional displays include enthusiasm and excitement. There are also indicators of early displays of opposition or refusal depending what is being asked of the baby. The increased familial connections formed serve to increase other social connections.

Rapid expressions of mood become commonplace. The expression of mood and emotions come on rapidly and can literally alter from seeming fine and content one moment to intensely negative the next. When in a state of relative calm, a toddler may be able to express rudimentary labeling of emotions regarding distress and other feelings of distress.

Nine to Twelve Months

Rudimentary signs of a self-esteem are shown as the infant responds enthusiastically to positive affirmations, such as clapping and other signs of positive attention. Separation anxiety may be shown in full bloom as the infant understands what people represent. The early signs of a sense of humor emerges with other moods such as anger, sadness, and happiness. Attempts are made to gain approval.

Continued on next page

continued on page 14
In contrast is Aaron who is the same age as Andrew. A fundamental child of difficult temperament, Andrew seems unable to “go along with the program.” Requests such as cleaning up and transitioning to another activity frequently lead to fits of crying, throwing of himself on the ground in a statement of upset resistance. Numerous meltdowns from Aaron occur throughout the day in the preschool classroom and these reportedly occur frequently at home. For example, getting ready for bedtime can be an enormously challenging undertaking and it is all that his parents can do to not be overly reactive and upset with him. Aaron also is seen to have great difficulty at birthday parties and other family gatherings. Andrew presents to others (who are whispering behind his back) that he is a predominantly selfish child who only wants things his own way, being unable to tolerate anything else. Aaron’s mother feels anticipatory anxiety whenever she thinks she will see her son. In the preschool classroom and these reportedly occur frequently. As the child progresses into his/her third year themes start to become crystallized and the child is seen as showing characteristic symptoms of emotions and its understanding of others moods and emotions. As the child progresses into his/her third year themes start to become crystallized and the child is seen as showing characteristic symptoms of emotions and its understanding of others moods and emotions. As the child progresses into his/her third year themes start to become crystallized and the child is seen as showing characteristic symptoms of emotions and its understanding of others moods and emotions.

Summary Considerations

Like virtually all aspects of child development, there is wide variation that is expected with the development of a child’s social and emotional functioning. Maintaining a “bell-shaped” curve perspective helps the pediatric practitioner to have guidelines as to what would be seen as “average” within any given period of a child’s early life. From the child’s earliest days there is a continual and ongoing interaction with the immediate environment that helps to shape emotional reactions leading the child to broaden its repertoire of emotions and its understanding of others moods and emotions. Regardless of the child’s characteristic and predominant temperamental style it is within this period of development that parents and caregivers would do well to be modeling appropriate behavior and basic social manners. Additionally encouraging and teaching empathy move children to understand how others’ feel in certain situations. Asking children targeted questions help them to be able to fine-tune their sense of emotions. For example, after seeing that a child has laughed at the misfortune of another, such as falling down in the classroom, a child who has been laughing can be asked (apart from others), “How do you think you would feel falling down in front of all of the other kids?”

Resident Voice: It Was My Second Day in the PICU

Jessica Lettieri, MD PGY2
Goryeb Children's Hospital-Atlantic Health System

She was angelic with her flower headband. A one year old beautiful who did not deserve to be there where she was or have experienced what she had gone through. She lay there lifeless and intubated surrounded by pictures and balloons from her family.

It was my second day in the PICU and we were preparing this beautiful little girl for organ donation. She had drowned, and her parents had decided to withdraw care. I was terrified to even look in her room, let alone walk across the threshold. I went with the attending and senior resident to prepare her body for donation.

I wanted to run away and cry as to how unfair it was that this innocent child who has suffered a terrible accident would never be a joyful child again. In a few hours she was to be transported to the OR to be extubated, allowed to die then would donate her kidneys and heart valves. I knew that residency would be difficult, but this was a day that made me question “What did I get myself into and did I make the right decision?” I went into pediatrics to help children, but in this baby girls case there was nothing else we could do to save her.

Her case hit me particularly hard because 10 years ago my uncle also drowned. It was a devastating loss for my family, so I felt deeply for her family that she was leaving behind. I knew how difficult it was to have a member of my family taken away in the blink of an eye from a drowning. My uncle was not considered as a candidate for organ donation. Looking back now after having this little girl in the PICU, I feel that it would have given my family some sort of closure and help us heal faster knowing that his death saved another’s life.
Human parechoviruses (HPeVs) are a group of viruses in the family Picornaviridae and are recently recognized as a cause of severe infection in the pediatric group especially in neonates. HPeV infection may present with nonspecific signs and symptoms like fever, rash, irritability, and/or poor feeding. Here, we report a case of a five-day-old full-term neonate presented with an episode of apnea and was found to be febrile on physical exam. HPeV identified as a cause of infection on cerebrospinal fluid analysis. The patient was treated with oxygen supplementation and intravenous immunoglobulins. This case emphasizes the importance of considering HPeV infection in the differential diagnosis in full-term neonates presenting with apnea.

Abstract

Human parechoviruses (HPeVs) are a group of small, nonenveloped, single-stranded, positive-sense RNA viruses in the family Picornaviridae. HPeVs have characteristics similar to those of enteroviruses and usually cause mild respiratory or gastrointestinal symptoms. However, some types may cause severe infection in neonates and may manifest as sepsis, encephalitis or gastrointestinal symptoms. However, some types may cause severe infection in neonates and may manifest as sepsis, encephalitis or gastrointestinal symptoms. However, some types may cause severe infection in neonates and may manifest as sepsis, encephalitis or gastrointestinal symptoms. However, some types may cause severe infection in neonates and may manifest as sepsis, encephalitis or gastrointestinal symptoms. However, some types may cause severe infection in neonates and may manifest as sepsis, encephalitis or gastrointestinal symptoms. However, some types may cause severe infection in neonates and may manifest as sepsis, encephalitis or gastrointestinal symptoms. However, some types may cause severe infection in neonates and may manifest as sepsis, encephalitis or gastrointestinal symptoms. However, some types may cause severe infection.

Introduction

Human parechoviruses (HPeVs) are a group of small, nonenveloped, single-stranded, positive-sense RNA viruses in the family Picornaviridae. HPeVs have characteristics similar to those of enteroviruses and usually cause mild respiratory or gastrointestinal symptoms. However, some types may cause severe infection in neonates and may manifest as sepsis, encephalitis or meningoencephalitis, myocarditis, pneumonia, and/or hepatitis. Here, we report a case of HPeV encephalitis presenting as apnea in a full-term neonate caused by HPeV.

Case Presentation

A five-day-old full-term male born via vaginal delivery without complications presented to ER after an episode of apnea, cyanosis and unresponsiveness lasting 30 seconds. History was significant for runny nose for 2 days, increased sleepiness, and decreased oral intake and urine output for 1 day. Parents denied fever, rash, jaundice, cough, vomiting, diarrhea or abnormal movements. On examination, temperature 102.1°F, heart rate 200 beats/minute, respiratory rate 34 breaths/minute, blood pressure: 91/79 mm Hg and oxygen saturation 88% in room air. Patient was sleepy but arousable. Anterior fontanelle was open, soft and flat. Langs were clear with non-laboring breathed. No murmurs appreciated. Muscle tone and newborn reflexes were normal. Rest of the exam was unremarkable.

Complete blood count, electrolytes, urinalysis and chest X-ray were unremarkable. Blood, urine and CSF culture were sent. Cerebrospinal fluid (CSF) analysis was significant for WBC 2/mm3, Protein: 58 mg/dL, Glucose: 54 mg/dL and PCR analysis detecting HPeV.

Patient was started on oxygen via nasal canula. Intravenous (IV) ampicillin and gentamicin were commenced empirically in ER and the patient was admitted to pediatrics floor. He remained febrile for 5 days after admission. He developed respiratory distress during feeds, with episodes of coughing, coughing, and labored breathing that self-resolved. He had multiple episodes of apnea with decreased oxygen saturations to 70s%. He was transferred to pediatric intensive care unit (PICU) for close monitoring. Nasogastric (NG) tube was inserted due to concerns of choking with feeds.

Given his recurrent apneic episodes and due to risk of severe viremic sepsis with this age group, IV immunoglobulin (IVIG) 1g/kg/day was administered for 2 days. Antibiotics were discontinued after 48 hours when blood, urine and CSF cultures were negative. Head ultrasound showed no evidence of hemorrhage. NG tube was removed on 3rd day of admission. Patient resumed breastfeeding. Patient was weaned off oxygen gradually over his hospital stay. He was hospitalized for 5 days and was discharged after being apnea free with no oxygen requirement for 24 hours.

Discussion

HPeV is a member of the family Picornaviridae. HPeVs were initially isolated as enteroviruses (echoviruses 22 and 23). Currently, HPeVs are classified in the genus Parechovirus, which includes 19 genotypes, HPeV-1 to -19. HPeV infections generally are asymptomatic or can cause mild respiratory and gastrointestinal symptoms. Infections, however, may be severe including sepsis, pneumonia, hepatitis, myocarditis and/or meningoencephalitis. Clinical manifestations and severity varies with HPeV genotype and patient age. In neonates and young infants, HPeVs, specifically HPeV-3, cause severe disease and usually present with fever, rash, decreased activity and poor feeding. 1,4,5

Respiratory, fecal-oral and in utero routes of transmission have been documented. Shedding from upper respiratory tract and stool may occur in absence of illness. HPeV infections occur throughout the year but more commonly during summer and fall months. 4,5

In neonates with HPeV infections, peripheral leukocyte count is normal or slightly elevated. Cerebrospinal fluid (CSF) evaluation may show either normal white blood cell count or pleocytosis. CSF protein and glucose are usually normal.6 HPeVs can be detected by reverse transcriptase polymerase chain reaction (RT-PCR) in stool, throat swab specimens, nasopharyngeal aspirates, tracheal secretions, cerebrospinal fluid, and blood. As HPeVs can be shed from upper respiratory tract and stool for prolonged periods, detection of the virus may not represent a current HPeV infection disease. 1,6

Currently, there is no available specific therapy for HPeV infections. Intravenous immunoglobulins (IVIG) has been used in severe HPeV infections complicated by myocarditis. 1,6

Conclusion

HPeV infection may present with nonspecific signs and symptoms like fever, rash, irritability, and/or poor feeding. It cannot be differentiated clinically from severe bacterial infection or disseminated CNS neonatal herpes simplex infection. Early diagnosis is important to avoid unnecessary treatment.

Several cases of HPeV infection have been described as apnea as the presenting complaint in pre-mature infants.7,8 This case emphasizes the importance of considering HPeV infection in the differential diagnosis even in full-term neonates presenting with apnea.

Although no specific treatment is available for HPeV infections, it was reasonable in our case to treat with IVIG given the age group and the risk of neurodevelopmental sequelae associated with HPeV encephalitis.9

References


Questions? Contact lreinhardt@njaap.org.
Legal: How Pediatricians Can Remain Independent in the Face of a Changing Climate

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Frier Levitt, Attorneys at Law

A recent article published on NJ.com titled “An insurance titan is dropping hundreds of N.J. physicians to enrich itself, doctors and patients charge” highlighted a disturbing trend. The physician highlighted in the story, a pediatrician, shared his and his patients’ experiences being terminated by UnitedHealthcare.

The article explains how UnitedHealthcare dropped hundreds of doctors in central and northern New Jersey Medicaid physician network. This caused thousands of low-income families to be steered away from their long-standing physicians to Riverside Medical Group (“Riverside”). Riverside is owned by Optum, which is a sister company of UnitedHealthcare and both subsidiaries of UnitedHealthCare Group. The article goes on to explain in more detail the impact of this move and the criticisms of same, including from Lawrence Down, CEO of the Medical Society of New Jersey.

One thing that is evident from this article is that insurance companies are fighting back against consolidation by private practices and hospital systems, which have led to more negotiating power and higher fees for providers.

While large private physician groups and hospital systems are largely unaffected by these types of terminations, which are usually the byproduct of an insurance company’s “vertical integration,” the physicians who stand to lose are small and solo independent practices.

Most independent practitioners do not want to become employees and lose their autonomy. They do not want to be dictated how to provide care or be told who to hire and fire. Unfortunately, as healthcare becomes more complex and insurers take measures against consolidated groups and hospital systems, it is the small independent practices that suffer the consequences.

So what options are available to pediatric practices who do want to remain independent?

There are options available, however, the two most prevalent ones are:

Clinically Integrated Network (“CIN”)

In a CIN, a group of providers come together to achieve “clinical integration,” which in theory facilitates the coordination of patient care across conditions, providers, settings, and time in order to achieve care that is safe, timely, effective, efficient, equitable and patient-focused. In a CIN, positive outcomes are the key determining factor and quality-based care the driving force behind higher reimbursement and savings. Practices who are members of a CIN remain independent, retain their own Tax ID, typically obtain considerably higher reimbursement rates and can use their current EHR. While CINs have many benefits, some of the drawbacks are that they are limited in size, rely heavily on quality care measures and do not offer as many potential cost savings and financial opportunities as the other.

Super Groups

The gold standard for integration is a clinically and economically integrated group practice operating under a single Taxpayer Identification Number (“TIN”). A Super Group, as it is commonly referred, is a single group practice operating under one TIN. A Super Group involves using separate “care centers,” each of which constitutes a separate “satellite” office location or group operated by those physician members of the Super Group who are affiliated with that particular Care Center. Each former- ly independent medical practice will cease to practice medicine as a separate company, and the physicians will comprise their own separate and distinct Care Center of the Super Group. The basic principle behind the formation of a Super Group is that physicians will generally be in a better position to face the ever-changing and complex healthcare environment if they are part of a larger group, while retaining their practice independence.

While Super Groups yield more cost savings and group buying power, offer more financial opportunities (e.g., ancillary services) and are not limited in size like a CIN, some of the drawbacks include higher startup costs and the eventual use of one EHR system.

Conclusion

Although the changing healthcare climate is impacting small independent practices disproportionately, there are practical common-sense solutions that can not only help small pediatric practices survive, but thrive and become more financially secure.
Introduction

New Jersey’s rates for both all-cause infant mortality and for sudden unexpected infant death (SUID) rates are higher for black infants. Disparities in antecedent causes, defined as adverse social and health determinants, contribute to elevated rates as do unsafe infant sleep practices. Adherence to the American Academy of Pediatrics’ (AAP) policy statement and were successful in transmitting this information to community members. Inclusion of a safe infant sleep unit within high school health curricula should be considered as a means for educating future parents and for disseminating information about infant safety into the community.

Discussion

An intervention to raise high school students’ awareness of risk factors for SUID was effective for students and the residents they educated in a community of color at higher risk for SUID. The curriculum significantly improved knowledge of sleep position, sleep location and soft bedding, all conditions more commonly found in the care of non-Hispanic Black infants.9,10 While education through health care providers at birthing hospitals continues to be critically important, compliance increases when the information is reinforced by a trusted member of the family and community.6,10 Back to Sleep has been called one of the seven leading research findings in the field of pediatrics in the past 40 years.12 Yet, the growth of this practice has remained stagnant in recent years. Two other benefits accrue to this methodology. In the future these students will become informed parents, and such outreach can educate综合体 adults who may not have access to hospital or office-based education but are involved in infant care. Grandparents and siblings are two examples. In particular, grandparents may have raised their infants using practices no longer deemed safe, such as prone sleep, and are an important audience for this information to community members. Inclusion of a safe infant sleep policy statement and were successful in transmitting this information to community members. Inclusion of a safe infant sleep unit within high school health curricula should be considered as a means for educating future parents and for disseminating information about infant safety into the community.

Researchers

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Abstract

BACKGROUND: Sudden Unexpected Infant Death (SUID) rates are higher for black infants. Disparities in antecedent causes, defined as adverse social and health determinants, contribute to elevated rates as do unsafe infant sleep practices. Adherence to the American Academy of Pediatrics’ (AAP) policy statement and were successful in transmitting this information to community members. Inclusion of a safe infant sleep unit within high school health curricula should be considered as a means for educating future parents and for disseminating information about infant safety into the community.

Methodology

The target population for this study was high school students from a school in Newark, New Jersey. Students completed a baseline knowledge survey of conditions that are associated with an elevated risk of SUID including non-supine sleep, smoking, bed sharing, lack of room sharing, crib bumpers, stuffed toys blankets and pillows in the sleep space, lack of breastfeeding, absence of vaccinations, and overheating. They then received a home education program consisting of the AAP guidelines to reduce the risk of SUID. They were then contacted by the Center of New Jersey. The program included information about the role of risk factors, a demonstration of how to reduce risks, examples of safe and unsafe conditions, and training on skills for conducting outreach education in their community. Educational material was also provided. Follow-up surveys of knowledge retention were completed after two months. Students recruited community members and provided baseline surveys, education and follow-up surveys of knowledge retention. All surveys were anonymous with no identifying information on students or parents. Chi-square tests were performed comparing questions on baseline and follow-up surveys using TIBCO Statistica Version 13.3, TIBCO Software, Palo Alto, CA. Approval was obtained for this project.

Results

Four hundred twenty-one students completed baseline knowledge surveys and participated in the education program. Students then recruited 232 community members and conducted outreach surveys and education. Three hundred thirty-four students and 138 community members were available to be re-surveyed. As noted in Figure 1 below, student knowledge significantly improved on 11 of 14 risk reducing practices. Lack of improvement on three items reflected already high levels of knowledge in these areas.

Figure 1. Student Knowledge of Practices That Reduce the Risk of Sudden Unexpected Infant Death

As noted in figure 2 below, community knowledge significantly improved on 11 of 14 risk reducing practices. For both students and community participants, knowledge about pacifiers was very low, and the largest growth in knowledge was in awareness of the risk posed by soft and loose bedding such as pillows, blankets, stuffed animals and bumpers and the role of overheating.

Figure 2. Community Knowledge of Practices That Reduce the Risk of Sudden Unexpected Infant Death

The curriculum significantly improved knowledge of sleep position, sleep location and soft bedding, all conditions more commonly found in the care of non-Hispanic Black infants.9,10 While education through health care providers at birthing hospitals continues to be critically important, compliance increases when the information is reinforced by a trusted member of the family and community.6,10 Back to Sleep has been called one of the seven leading research findings in the field of pediatrics in the past 40 years.12 Yet, the growth of this practice has remained stagnant in recent years. Two other benefits accrue to this methodology. In the future these students will become informed parents, and such outreach can educate adults who may not have access to hospital or office-based education but are involved in infant care. Grandparents and siblings are two examples. In particular, grandparents who may have raised their infants using practices no longer deemed safe, such as prone sleep, are an important audience for this information to community members. Inclusion of a safe infant sleep policy statement and were successful in transmitting this information to community members. Inclusion of a safe infant sleep unit within high school health curricula should be considered as a means for educating future parents and for disseminating information about infant safety into the community.

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7. Oven N, Marksted T, Skareen R, Legens RM et al. This study had several strengths. First, it supports our previous finding11 that high school students can learn this information. Secondly, to our knowledge, education of students to become effective health educators has been very well explored. Therefore, this study provides new evidence in support of a safe infant sleep program within high school health curricula to educate future parents and their communities. Our study had several limitations. Although the school was attended predominantly by non-Hispanic Black students, no identifiers including race, grade or age were recorded in order to maximize confidentiality. With a similar goal, pre- and post-surveys were not paired. Thus the increment in knowledge represents total group rather than within student change.
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A Rare Case of E. Coli Meningitis with Subdural Empyema in Otherwise Healthy Infant

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Wenyuan Xu, MD, Monmouth Medical Center
Sanjna Shah, MD, Monmouth Medical Center
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Introduction
Suspected bacterial meningitis in an infant is a medical emergency requiring immediate attention, thorough examination, diagnostic work up and appropriate management. Confirming diagnosis can be difficult and clinical signs are often subtle. A delay in diagnosis or management may ultimately lead to neurological complications and unfavorable outcomes.

The incidence of meningitis has sharply decreased after the introduction of Pneumococcal and Haemophilus vaccination, however it remains a major contributor to pediatric morbidity and mortality. The majority of cases are attributed to following pathogens: Streptococcus pneumonia (S. pneumonia), Haemophilus influenza, Neisseria meningitides, Group B streptococcus(GBS) and Escherichia coli(E.coli).

Here we describe a case of an infant diagnosed with E.coli meningitis, whose course was complicated by a series of neurological sequelae requiring multiple surgical interventions.

Case Presentation:
Our appropriately immunized 3 months old, male patient initially presented to an outside facility with fever, lethargy, irritability, vomiting, reduced oral intake and decreased activity level for 1 day. He was noted to be pale, febrile and tachycardic on arrival. His labs were remarkable for white blood cell (WBC) count of 6,500 cells per cubic millimeter with 25% bands. He was evaluated and admitted for observation given elevated bands in the setting of a febrile infant. He remained persistently febrile despite symptomatic management and antipyretic, round the clock. He continued to remain irritable, lethargic, refusing all feeds and vomiting. The following morning he was noted to have a bulging anterior fontanelle, for which he was started on empiric Ceftriaxone and Vancomycin and transferred to our facility for a higher level of care.

Upon arrival to our institution, lumbar puncture was performed and revealed Cerebrospinal Fluid (CSF) analysis consistent with a diagnosis of meningitis, including WBC 45,000 cells per cubic millimeter with 61% neutrophils. CSF meningitis panel turned positive for E.coli and Streptococcus pneumonia and CSF culture was positive for E.coli within 24 hour. Due to presence of S. Pneumonia, Ampicillin was added to his antibiotic regimen.

Although his neurologic status and feeding improved over the next 2 days, he was persistently febrile and his head circumference increased from 36cm to 45cm (> 97th percentile). Brain MRI was obtained which revealed large complex bilateral subdural collections overlying cerebral convexities with mass effect in cerebral hemispheres. Given the unusual etiology of meningitis for his age group, the possibility of a neuro - enteric connection and renal anomaly was ruled out with spinal MRI and renal ultrasound.

Neurosurgery was consulted who performed bilateral bur hole drainage and placement of subdural drains. The fluid drained was also positive for E.coli. On repeat MRI, 6 days later he had developed a complex right subdural collection with pneumocephalus with a midline shift. His left subdural drain seemed to be poorly functioning. Craniotomy with fluid evacuation and gentamicin washout with replacement of drains was performed. His postoperative condition was further complicated with a frontal lobe abscess and subgaleal collection which were also drained with craniotomy. After a complicated postoperative course and about 60 days of intravenous antibiotics, his neurological status stabilized and subsequent MRI showed stable left sided hygroma and nodular enhancing focus likely representing cavity collapse. EEG was repeated with no seizure activity but revealed mild cerebral dysfunction. He passed his hearing test and was discharged on Levetiracetam for seizure prophylaxis.

Suspected bacterial meningitis in an infant is a medical emergency early in his hospital course. This is a rare entry in the setting of E.coli meningitis. This patient had a very complicated and lengthy course following his diagnosis and needs close neurodevelopmental follow-up to assess long term sequelae of his illness.

Hence, it is very important to promptly recognize, timely diagnose and appropriately treat any case of meningitis given its rapid progression and severity of complication which might prove to be a clinical catastrophe for a patient, in the long run.

References

The New Jersey Chapter, American Academy of Pediatrics would like to thank our remarkable nurses for their dedication to providing positive experiences for patients throughout the year. We especially appreciate your perseverance on the front lines during these extraordinary times.
infants not breastfed optimally have increased risk of acute otitis media, severe lower respiratory infections, viral gastroenteritis, sudden infant death, overweight or obesity, type 1 and type II diabetes mellitus, acute lymphocytic leukemia, acute myeloid leukemia, asthma, atopic diseases, while preterm infants not breastfed or fed their mother’s milk has increased risk of necrotizing enterocolitis and sub-optimal neurodevelopment.1

Breastfeeding and human milk are the physiologic norm, with species-specific nutrients promoting normal growth and development. Human milk contains numerous immunomodulating and anti-inflammatory factors which prime the immune system, protecting young children against acute infections and chronic immune disorders, sometimes long after weaning. Human milk is protective and promotes, promoting a normal microbiome.

The impact of mother’s milk on many medical conditions is dose dependent. Exclusive breastfeeding is crucial for protection against some diseases such as acute otitis media, severe lower respiratory tract infections and atopic diseases, while even partial, non-exclusive breastfeeding confers protection against other conditions such as viral infections.1 Duration of breastfeeding affects the development of obesity, type 1 and type II diabetes, and both types of childhood leukemia in dose-dependent fashion.2

In addition to a large body of evidence supporting the importance of human milk, emerging scientific literature suggests health implications not just from the milk but the mode of feeding. Preterm infants and infants with congenital heart disease maintain their respiratory rate, oxygen saturation and heart rate during breastfeeding, while these vital signs decompensate when the same infants are bottle fed their mothers’ milk.3,4 Contrary to common belief, breast feeding mother’s breast requires no greater energy expenditure than bottle feeding for preterm infants, even though breastfeeding takes longer.5 The mode of infant feeding also plays a role in the infants’ self-regulation of intake. Among infants 7- months or older who are exclusively breastfed at mother’s breast for the first 6 months, only 27% finished their bottle or cup; 47% and 36%, respectively, of infants who were mixed fed, breast and bottle, chose a mother’s milk or formula, and 68% of those who had been formula fed (bottle fed by default) since birth, were finishing their bottle/cup.10

Another consequence of bottle feeding is the potential impact of un-physiologic suckling with the artificial teat on the child’s oral development, which can lead to malocclusion 1 and possible pharyngeal dysfunction.10

Health outcomes for mothers who do not breastfeed optimally include increased risk of breast and ovarian cancer, type II diabetes and postpartum depression.11 Additional women’s health benefits include the option of lactational amenorrhea for family planning.12

The cost of suboptimal breastfeeding in the USA based on 20 of the medical conditions in which not breastfeeding plays a part, was estimated using a computer model, suggesting that if 90% of US mothers breastfed until 6 months, medical care cost savings of $13 billion a year could be realized while upwards of 900 infant deaths would be prevented.13 For every 1,000 infants not breastfed, an excess 2,053 physician visits, 212 hospital days and 609 prescriptions ensue. Further strains on the economy from suboptimal breastfeeding include twice as many 1-day absence from work for formula-feeding compared with breastfeeding mothers, and significant environmental damage from production, packaging, transport of formula and disposal of containers. For every 1 million formula-fed infants, 150 million containers are consumed, many of which are not recycled.

Breastfeeding is lifesaving during a variety of natural and human-made disasters. The importance of breastfeeding and mother’s milk is protecting infants internal health infrastructure and the healthcare system. Recommendations for the healthcare system include the following: Improve the breastfeeding content in undergraduate and graduate education and training for health professionals; establish and incorporate minimum competency requirements in lactation care into health professional credentialing, licensing, and certification; and, increase opportunities for continuing education on lactation management to ensure maintenance of minimum competencies and skills.16

Excellent resources exist for physicians to improve lactation knowledge and skills. Among them: a breastfeeding curriculum from the American Academy of Pediatrics;17 the AAP’s Section on Breastfeeding, and, the Academy of Breastfeeding Medicine, an international physicians’ association whose main mission is educating physicians about breastfeeding, with a course entitled “What Every Physician Needs to Know about Breastfeeding.” The peer-reviewed journal “Breastfeeding Medicine,” and evidence-based Protocols, translated into various languages, with excellent websites offering guidelines and resources to clinicians. In addition, the World Health Organization 2007. http://www.who.int/child-adolescent-health/publications/NUTRITION_ISB2_4_15923_0.htm

References

Maternity practices have long demonstrated significant impact on breastfeeding success. The Baby-Friendly Hospital Initiative (BFHI) offers services and attributes that form the basis for evidence-based policies/practices which facilitate breastfeeding, known as the Ten Steps to a Baby-Friendly Hospital (BFHI). Implementation of the BFHI has been successful worldwide but its progress in the US has been much slower.14 Even in hospitals not designated by BF-USA, adherence to the policies demonstrates a linear positive correlation with maternal breastfeeding success in New Jersey Hospital Guidelines essentially encompass these policies. The Ten Steps have recently been revised in order to be consistent with recent evidence.2

The Centers for Disease Control are supporting and monitoring the implementation of the Ten Steps, while the AHRQ recently published a literature review supporting Baby-Friendly implementation as an effective practice.

By committing to educating themselves about breastfeeding, advocating for and providing evidence-based, culturally sensitive care to breastfeeding mother-baby dyads while facilitating appropriate referrals and resources, pediatricians can proactively contribute to the health and well-being of the families in their care.


23. www.bfmed.org


25. www.babyfriendlyusa.org

26. www.tensteps.org


Abstract: Positional plagiocephaly is an increasingly common clinical finding in infants. It has become the concern or complaint of many parents, perhaps due to recent increase in social media utilization. Deformational plagiocephaly is an acquired flattening of the skull, seen with increased pressure, often from laying on one area of the head for extended periods of time. Positional plagiocephaly is a finding that may be first reported to a variety of practitioners, such as pediatricians, pediatric neurologists, pediatric neuroradiologists, and plastic surgeons. As early diagnosis is essential for quick implementation of therapy, it is essential to disseminate more information regarding the guidelines of therapy.

Keywords: Plagiocephaly, craniosynostosis, helmet therapy, neurosurgery

Introduction

The incidence of positional plagiocephaly has been increasing since 1992, when the American Academy of Pediatrics (AAP) initiated the “Back to Sleep” campaign in an effort to reduce Sudden Infant Death Syndrome. The campaign recommended that infants be placed in the supine, rather than the prone position, when sleeping. A recent cohort study done in Alberta, Canada found the incidence of positional plagiocephaly to be as high as 46.6% in infants at 7 to 12 weeks of age. In the US, it is estimated that up to 20% of infants experience some degree of plagiocephaly.

Differential Diagnosis

It is important to differentiate infants with positional plagiocephaly and those with craniosynostosis, a condition caused by the early closure of cranial sutures, which may cause abnormal brain and skull growth. In both cases, early recognition and initiation of corrective therapy is beneficial. Imaging may be beneficial to differentiate between the two conditions, however the use of routine imaging on children does not come without risk. The gold standard of diagnosis for craniosynostosis is Computed Tomography (CT) of the head, which exposes the child to radiation. It is also often necessary to use general anesthesia to obtain these images in young children.

Discussion

As early recognition and diagnosis is essential, it would be beneficial to follow evidence-based guidelines regarding the diagnosis and management of infants with positional plagiocephaly.

In 2016, the Congress of Neurological Surgeons (CNS) published updated guidelines on the diagnosis and treatment of plagiocephaly, including recommendations on the use of imaging, physical therapy and helmet therapy. However, these guidelines have not been widely disseminated to pediatricians.

While there have been recommendations made by the AAP such as increasing “tummy time” and decreasing time spent in car seats, the incidence of positional plagiocephaly continues to increase. As a result, there have been increased use of molding helmets, or cranial orthotic devices to correct positional plagiocephaly. However, the most recent guidelines have recommended physical therapy as the mainstay of treatment for positional plagiocephaly. The CNS guidelines published in 2016 gave Physical Therapy a level I recommendation, indicating high clinical certainty, stating that physical therapy is recommended over repositioning education and positioning pillows.

Helmet therapy is recommended for those infants with persistent moderate to severe plagiocephaly after a course of conservative treatment with repositioning and physical therapy has failed. This recommendation is given a Level II recommendation: it is important that helmet therapy is not overused, as the treatment is not benign; it has been associated with complications including pressure sores, ethanol erythema, as well as skin erosions/infections. The increase in request for helmet fitting therefore either represents an increase in prevalence of advanced age plagiocephaly or an increase in more severe presentations. Both are indications for wider dissemination of information regarding the diagnosis and proper treatment for positional plagiocephaly.

As the most common presentation of positional plagiocephaly is likely to the pediatrician, more information regarding the clinical diagnosis and recommended treatments should be available to the pediatric care providers. However, the most recent guidelines published by the Congress of Neurological Surgeons were not published in the Journal of Pediatrics. The Journal did publish a news article stating that new guidelines were available on the CNS website, however the encrypted link to the guidelines cannot be found when clicked on 7.8 It is imperative that we increase awareness of this reversible condition to both the general public and the providers who care for them. The CNS has created a phone based application called CNS Guidelines which is free and available on android and iOS devices. This app has available guidelines for download on the treatment of positional plagiocephaly, hydrocephalus and spina bifida.

Conclusion

In conclusion, the incidence of positional plagiocephaly has continued to increase in North America. These infants may initially present to a variety of practitioners, including pediatricians, pediatric neurologists and pediatric neuroradiologists. There is an increased need to follow evidence-based guidelines regarding the diagnosis and management of plagiocephaly in order to avoid unnecessary therapies, imaging, and costs. The CNS guidelines on plagiocephaly should be more widely distributed and available to practitioners, particularly pediatricians, who are often the first to diagnose plagiocephaly.
The retropharyngeal space is located between the pharynx and cervical vertebrae and extends from the skull base down to the superior mediastinum at the level of the bifurcation of the trachea. This space is filled with lymph nodes that drain the mucosal surfaces of the upper airway and digestive tracts. Infection of these nodes usually happens as a result of extension from a localized infection of the oropharynx that can progress into cells, phlegmon and abscess.

Retropharyngeal abscess is a common neck infection seen in children less than 5 years of age that usually occurs following an upper respiratory infection. According to a national database published in the Journal of the Pediatric Infectious Diseases Society, the diagnosis of retropharyngeal abscess among children and adolescents <20 years old in the United States increased from 2.98 per 100 000 population in 2003 to 4.10 per 100 000 population in 2012.2 Retropharyngeal abscess is a serious condition as it can extend to contiguous structures and cause airway compromise and worsening sepsis. A thorough clinical examination is needed as early identification of life-threatening complications is crucial. This report here is the case of an infant who presented with compromise of his left hypoglossal nerve secondary to a retropharyngeal collection.

**Case Report**

A previously healthy nine-month-old male presented with acute onset of abnormal tongue protrusion and curling, forceful eye closing, and head tilt to left. This was preceded by 1 day of fever to 103°F and 3 days of fussiness and cough. He was initially evaluated by his pediatrician and diagnosed with bilateral acute otitis media and started on amoxicillin-clavulanate. There were no known exposures to ill children or adults. The patient previously received age appropriate vaccines, with the exception of the second seasonal influenza vaccine. Complete blood count done at pediatrician’s office revealed white blood cells (WBC) of 54.5 x10⁹/L, with 68% neutrophils, 7% bands, 11% lymphocytes and 11% monocytes, hemoglobin of 12.2 g/dL and platelet count of 348,000/µL; his peripheral blood smear showed no abnormal immature cells. C-reactive protein was elevated at 130.4 mg/dL (0.0-7.0). Cultures of blood, sputum, and cerebrospinal fluid (CSF) were negative; CSF analysis was normal. Chest radiographic findings were unremarkable. Nasopharyngeal viral panel was positive for respiratory syncytial virus.

The patient received 1 dose of ceftriaxone in the emergency department pending results of CSF analysis. Upon admission to the pediatric inpatient area he was started on ampicillin/sulbactam. Video electroencephalography (VEEG) obtained due to concern for focal seizure activity revealed no epileptic discharges. MRI of the neck and head revealed a left retropharyngeal collection abutting the skull base anterior to the internal jugular vein and in close proximity to the left hypoglossal canal (Figures 182 below).

With the diagnosis of left retropharyngeal abscess, the patient underwent drainage by an otolaryngologist. Incision and drainage yielded 5 mL of purulent fluid; Streptococcus mitis was recovered from the culture. The patient continued intravenous antibiotic treatment with ampicillin/sulbactam for 6 days and was discharged home after normalizing of his symptoms to complete an additional 10 days of amoxicillin-clavulanate. Prior to discharge, repeat laboratory evaluation showed WBC count of 13,400/µL with 37% neutrophils, no bands, hemoglobin 13.2 g/dL, hematocrit of 449,000/µL. CRP decreased to 14.7 mg/dL and CSF; blood and urine cultures remained negative. ASO titer measured a month prior to discharge was 449,000/µL, CRP decreased to 14.7 mg/dL and CSF; blood and urine cultures remained negative. ASO titer measured a month after admission was negative.

**Discussion**

Retropharyngeal abscess (RPA) is a deep neck infection seen most commonly in children between 3-4 years of age due to their unique anatomy, as the retropharyngeal nodes regress after 5 years of age.1 Etiology is generally polymicrobial, some of the most frequent microorganisms include Streptococcus viridans, group A Streptococcus, Staphylococcus aureus, S epidermidis, as well as anaerobes like Bacteroides, Fusobacterium and Peptostreptococcus sp.2 The clinical presentation varies according to age, but children typically present with fever, dysphagia, and neck pain. Other symptoms may include sore throat, odynophagia, drooling and decreased oral intake.

On physical examination, children present with neck swelling, decreased range of motion, torticollis, triad, cervical lymphadenopathy and unilateral oropharyngeal bulge is sometimes seen.3 Common complications of RPA include aspiration pneumonia, meningitis, jugular vein thrombosis (Lemierre’s syndrome), carotid artery rupture and/or osteomyelitis of the nearby vertebrae. This case described pediatric retropharyngeal abscess is an extremely rare complication.

Four case reports have described hypoglossal hypoparesis associated with a retropharyngeal abscess4-7 and only half of these cases showed a complete resolution of symptoms following prompt management,6,7 of these last two cases, one was a 15-year-old male who presented with right-sided neck pain and stiffness, odynophagia, dysphonia, and tongue deviation. Examination revealed a right-sided oropharyngeal bulge, tongue deviation to the right on protrusion, pain with neck motion, and right-sided lymphadenopathy. Streptococcus mitis identified as the causative bacteria. This gramm-positive cocci forms part of the human oral flora and is known to cause infections of the oropharynx (including head and neck abscesses), gastrointestinal and genitourinary tracks.5,6

This case highlights the importance of having a high index of suspicion for a retropharyngeal abscess, even in the absence of a particular presentation and when symptoms involve anatomic structures in the vicinity of the retropharyngeal space, such as the hypoglossal nerve.

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Jointly conducted by the New Jersey Immunization Network, a division of NJAAP, and in collaboration with the New Jersey Department of Health , Vaccine Preventable Disease Program.
A Case of Methicillin Resistant Staphylococcus aureus Meningitis Complicated by Cavernous Sinus Thrombosis in a Pediatric Patient

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Abstract
Staphylococcus aureus is a rare cause of bacterial meningitis in children. We report a case of methicillin resistant S aureus (MRSA) meningitis complicated by cavernous sinus thrombosis in a pediatric patient.

Presentation
Patient is a 6-year-old female with congenital hypothyroidism, well-controlled on levothyroxine, who presented to our hospital with fever, headache, and a swollen left eye. She was in her usual state of health until three days prior to presentation when she developed tactile fever, headaches, and photophobia. She also had decreased activity level and appetite. On the day of admission, she was evaluated by her pediatrician and was febrile to 105.1°F in the office but had no other localizing symptoms or exam findings. A few hours later, she had an episode of emesis and was noted to have a swollen left eye prompting her presentation to the emergency department (ED).

She denied any visual complaints or upper respiratory tract infection (URTI) symptoms. No sick contacts. Travel history was significant for a 3-week trip to El Salvador, where she stayed in both rural and urban areas with family and was exposed to both swimming pools and tap water. She returned to the USA around 3 months before admission and has been living on the East Coast ever since. During her admission were negative for endocarditis.

Patient Course
During her hospitalization, she underwent bilateral sphenoidolocystic and sphenoid sinus washout. She developed hydrocephalus, requiring emergent ventricular drain placement and subsequent ventriculoperitoneal shunt placement. The patient was intubated for the first two weeks of her hospital stay, followed by tracheostomy placement due to a need for prolonged respiratory support. She briefly received anticoagulation with enoxaparin for the cavernous sinus thrombosis. She was discharged from the hospital after the patient developed a subarachnoid haemorrhage near the pre-pontine cistern. On hospital day 32, a follow up head CT scan revealed findings suggestive of a mycotic aneurysm of the left cavernous internal carotid artery requiring coil embolization as well as several punctate acute infarcts in the right pons, bilateral cerebral hemispheres, scattered throughout the right frontal corona radiata and centrum semiovale consistent with meningeal related infaracts. The patient received a prolonged course of linezolid and rifampin for the first two weeks of antibiotic therapy. She was discharged on hospital day 48 to an inpatient rehabilitation facility for rehabilitation with a plan for ongoing rehabilitation rehabilitation. At the time of writing this manuscript, the patient is wheelchair bound, with gradually improving bilateral paresis, left more than the right, she tolerates oral intake, maintains eye contact, is wheelchair dependent, and is able to communicate with small words and phrases. She currently receives home physical therapy, occupational therapy, and speech therapy.

Discussion
Suspected bacterial meningitis is a medical emergency and diagnostic tests including a lumbar puncture should be immediately performed before the initiation of empiric antibiotics. However it is well established that antimicrobial therapy not be delayed if there is a contraindication or inability to perform a lumbar puncture. Empiric antibiotic therapy for patients older than one month should include vancomycin and a third-generation cephalosporin, both dosed to achieve treatment levels in the central nervous system. Small words and phrases. She currently receives home physical therapy, occupational therapy, and speech therapy.

Staphylococcus aureus is a rare cause of bacterial meningitis in children, with a reported incidence of <1%. It is common for initial Gram staining of CSF to be negative in Staphylococcal meningitis, with report of detection via Gram stain occurring in only 20% of cases. Thus, the diagnosis is frequently made when the organism grows in CSF culture, as seen with our patient.

One study investigating central nervous system (CNS) infections in children with positive CSF cultures or spinal epidural abscesses for Staphylococcus aureus found that 67.2% of infections were caused by methicillin sensitive Staphylococcus aureus (MSSA) and 32.8% by MRSA. Two small studies have reported a trend toward higher morbidity and mortality in adult patients with MRSA meningitis compared with that caused by MSSA.3 4 The two primary mechanisms of pathogenesis of Staphylococcal meningitis include postoperative infection following a neurological procedure and hematogenous spread as a complication of bacteremia.5 Predisposing factors in hematogenous spread include endocarditis, epidural/paraspinal abscess, skin/skin tissue infection, pneumonia, urinary tract infection, sinusitis, otitis media, and osteomyelitis. S. aureus sinusitis was likely the pre-disposing factor for our patient. Common complications of bacterial meningitis include seizures, increased intracranial pressure, disseminated illness such as septic carditis and pericarditis, and focal neurological deficits such as hearing loss and cranial nerve palsies.6 While less common, cerebrovascular complications including thrombosis, vasculitis, and infarction can occur.7

Cavernous sinus thrombosis (CST) is an uncommon complication and has rarely been reported in children. S. aureus has been documented as the causative agent in 60-70% of reported cases; other pathogens include S. pneumoniae, gram-negative bacilli and anaerobes. MRI with or without Magnetic Resonance Angiography (MRA), appears to be more useful than CT to identify the nature of the disease and assess intracranial complications in early stages. A retrospective study of 30 cases of CST, the most common presenting symptoms were headache, fever, and vomiting, with the most common neurological deficit being unilateral or bilateral visual loss, loss of light perception, or both. In 4 cases, treatment with linezolid and rifampin for the first two weeks of antibiotic therapy. She was discharged on hospital day 48 to an inpatient rehabilitation facility for rehabilitation with a plan for ongoing rehabilitation rehabilitation. At the time of writing this manuscript, the patient is wheelchair bound, with gradually improving bilateral paresis, left more than the right, she tolerates oral intake, maintains eye contact, is wheelchair dependent, and is able to communicate with small words and phrases. She currently receives home physical therapy, occupational therapy, and speech therapy.

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Infants, children, and adolescents with craniofacial anomalies have complex problems related to facial appearance, brain growth, feeding, speech, hearing, breathing, dental and oral-maxillofacial development, and psychosocial development.

The NJ Craniofacial Center is an independent group of highly-trained physicians, dentists and specialized therapists who compassionately treat babies and children with a wide range of congenital and acquired craniofacial conditions. Commonly treated conditions include cleft lip, cleft palate, craniosynostosis, positional plagiocephaly, microtia and facial trauma.

Started in 2007 by the physicians who helped write the AAP endorsed Plagiocephaly Guidelines, the NJ Craniofacial Center was the first craniofacial team to perform endoscopic craniosynostosis surgery in New Jersey. Our goal is to provide the highest quality of care at all times, utilizing modern technology but limiting the use of CT scans and radiation whenever possible.

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