Pediatric Neurology with Dr. Justin Rosati, MD Transcript

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Introduction and Dr. Rosati's Background

Hello, welcome to this week's episode of the Baby Manual Podcast. Today, I have the pleasure of speaking with Dr. Justin Rosati, MD, who is a pediatric neurologist.

Dr Rosatti, can you just tell us a little bit about yourself and pediatric Yeah, I'm a pediatric neurologist. I actually have some specialty training in neonatal neurology and clinical neurophysiology, which means I can look at brain waves.

But yeah, i've been doing this for, oh God, now three full years as faculty. And I am an assistant professor at the University of Rochester in the Department of Neurology.

That's really cool. Well, awesome. So can you just tell us about a couple of things that you see really commonly, like reasons that parents come to see you and things they can watch out for at home?

Yeah, the things that I see most as a pediatric neurologist are seizures, developmental delays, concerns, headaches, and sometimes, well, actually a lot of this is kind of overlap with its developmental delay, but motor weakness, gross motor delays.

Speaking speech delays things like that. That's cool. I know parents are often really worried about seizures and there are a lot of things that can look like seizures.

And also if a baby is having seizures, it can be pretty serious. So maybe you can just tell parents a little bit about like what to look out for for infantile spasms, for example.

Common Pediatric Neurology Concerns

So seizures really depend, different seizure types for different ages. Infantile spasms are definitely the one that we worry about most, especially in infancy, obviously the name infantile spacems.

Typically we see them around four months to eight months. but they can go anywhere from two months to a year or even longer. They are very different than the traditional seizures that people think about of like the shaking, loss of consciousness type of seizures, whole body.

Actually, they look like startles and they could be very subtle, often involve flexion of the head and neck. So I'm trying to demonstrate here. But they come over and over, and their unprovoked.

We often see them in clusters. So once they start, sometimes people notice them one or two here or there, but then as they go and develop, we start to see they're coming on in bunches.

One of the things that is particularly noticeable or concerning with infantile spasms is once the start we often notice a plateauing in development or even some regression.

Infantile Spasms: Warning Signs and Lookalikes

This is because the way infantile spasms work in the brain basically stops the brains from working correctly and we can really see this progression over, you know, days to weeks and if not treated early, that progression can become more permanent.

And what are some things that sort of look like it? So you mentioned it looks like startling but startle is okay and that is provoked by something like a sound.

Like I said, so startling, but these are unprovoked. They can sometimes look like a condition that is benign, which is sleep myoclonus. So if you've ever watched your baby go to sleep, you see them little jerks.

Actually, adults do this too. And if started to fall asleep and feel like you're falling and jerk yourself awake. That's what we call a hypnic jerk or sleep myoclonus.

Those are totally normal. And if a baby is falling in and out of sleep, that's okay. But these often come when babies are awake, usually sitting up, sometimes eating or doing things that would require them to have some level of consciousness.

So if you start to see that when they're doing other things, it's definitely something that is more concerning and something to look out for. And then, like I said, an increase in the amount or coming in clusters is definitely something we look for.

One other thing that comes to mind is that when babies have reflux, sometimes they'll arch their backs and sometimes that can sort of mimic something that looks like a seizure in adults and that's not a seizures as well.

Yeah, very common question we get. And then a couple of things that can help you with that is if it's around the time of feeding, that's one. Babies will often arch and they'll get red and it can have like coughing sounds.

That's two that kind of pushes you in the other direction. Though there are some cases that are a little bit more difficult, especially when a baby turns red, and you're not sure if they're breathing or not.

My advice for any type of seizure or abnormal movement is if you can get a video of it, grab your phone, take a quick 30 seconds to just document what you're seeing because that helps us a ton.

It'll help your pediatrician. And it'll definitely help us as neurologists when you come to see us. Yeah, that's great advice. Now, febrile seizures are actual seizures as well.

Is that still six months to six years when we see that? Yeah, primarily six months to six years. If it happens before six month, we often think about other types of epilepsies.

And really the six-years, it should start to fade around six year. It's very rare to have your first febrile seizure from five to 6. So we usually see them mostly around, I would say a year to three years, that's when the peak of february seizures are.

They definitely start fade as kids get bigger. Yeah, so a simple febrile seizure, maybe you could just sort of describe what that looks like and I know there's often a family history as well with that.

There's two types of febrile seizures. We'll talk about simple febrale seizures first. So, um, simple February seizures are short, generalized, and they, those are really the two characteristics.

Short being less than five minutes. we sort of changed this definition over the last few years or so. It used to be when I was a medical student, it was 15 minutes now we're down to five.

And generalized meaning the whole body is involved and it doesn't start like with one arm, one leg. That then puts it into the classification of complex.

So complex febrile seizures are usually longer, so longer than five minutes in this case. They typically have some sort of, and they could have a focal onset.

Febrile Seizures: Types, Risks, and Treatment

So if they start with one arm or one side of the face is moving and then generalizes into a full body seizure, that makes us think more complex. And then the one other thing that could put them in the complex category, which is

somewhat debatable depending on the neurologist you ask, is if you've had more than one in 24 hours.

For me, the big thing is, if we've more that one without returning to your baseline, Now with simple febrile seizures, I know a lot of parents say, it's very scary to watch your kid having a seizure.

So I always recommend if it does happen, look at the clock because five minutes can feel like a half hour. Like it can be very, scary, to be in that moment.

But simple February seizures don't cause developmental delays. They don' turn into epilepsy. If they don"t cause any problems down the road, they, don "t need medications for it, things like that.

I know sometimes for kids that would have more than one febrile seizure like months or years apart, we would sometimes give a rescue medicine for seizures.

Is that still done? We tend to give the rescue medication mostly for those complex febrile seizures, especially for the long ones, because most seizures will stop on their own within a few minutes.

It is rare for a seizure to go longer than five minutes into what we would then categorize as status epilepticus. The reason that we would give a rescue medication, and we tend to do this more for our complex febrile seizure kids who will have, when they have their february seizures, they tend be long, is to break that seizure.

Usually after three to five minutes, we'd recommend doing it so it doesn't end up being one of those long seizures. A lot of people ask me, how do you prevent febrile seizures?

And unfortunately, kids will, if they're prone to having febrow seizures, they will just have them. You can't really pre-medicate with Tylenol or ibuprofen to try to keep the child from getting a fever when they're sick, because a couple of reasons why.

One is that a febrile seizure can happen 24 hours before or after a afeever. So sometimes the seizure is actually the first sign that the child is sick.

And it's not uncommon that kid will have a seizure, come to the emergency department, And then we check their temperature and it's, oh, it' 39 or 102. And we're like, Oh, yep, that was a febrile seizure.

It's not so much the height of the fever. There are some kids that are just genetically predisposed. The brain is really overly wired at that age. So it doesn't take as much to have a seizure, but for the most part, like you said, they are usually not dangerous, and they do not cause any long-term injury to the brain.

We usually also tell parents that if a child has had one febrile seizure, they are at higher risk than the general population of having another one. But it doesn't mean that they're going to have one every time they have a fever.

They might just have 1, or they might have That's true. There are some cases, most of the time, so with febrile seizures, it is unlikely that you're going to have one with every single time that your sick.

If you do, if children do have a fever every time they are sick, then sometimes we think about a little bit, you know, there are certain genetic conditions that are very prone to febrale seizures.

And then there is a switch the moment you have your first seizure without a fever. So once you a seizure that is not in the setting of a not sick, then you kind of, we think about it a little bit differently.

We don't always get EEGs or brainwave tests on kids with simple febrile seizures, but we often do it with kids, with complex february seizures. And we will get one as soon as a child has a seizure without a fever.

So yeah, what other things do you think parents should know about? I think ever since becoming a parent myself, development has been a thing that has an interesting change of pace.

I mean, I learned all kinds of things about development and I frequently see kids for developmental delays. The big things that I like to tell people, because I do get referrals for kids who aren't meeting their milestones, and the milestone checklists are a fantastic guide.

They do not necessarily mean there's something wrong with your child if they do no meet a milestone. All of those milestones are ranges. And when you or your when your child starts to either miss a milestone or is behind on a Milestone, there triggers a question of, OK, why is this child delayed on their milestone?

And that's usually when they end up in my office. So we look at things like low muscle tone. We look At things. Like, you know, was there an injury to their brain at some point, either around the time that they were born or in utero?

Is there a genetic condition going on? A lot of times, I would say about half the time when kids come to see me for developmental delays, they have a totally normal neurologic examination and it's just they need more time.

But then there's those kids who do need some further testing and work up, especially if they had low muscle tone or pretty significant delays. And I think some of the red flags that are sort of general red flag to look out for, if a child has a hand preference before age two or is only using one of their hands, that's something that you should ask the doctor about.

Developmental Delays and Early Red Flags

If they're only eating food that in pouches after a year, I get a little nervous about that because they should be at least trying to like chew and swallow some foods at that point.

Do you have other sort red flags that you think there might be some like a neurologic cause of that? Yeah, other red Flags are usually like lifting your head.

So head lag is a big one. If you notice, like every time you're trying to pick your baby up there, usually after about four months, and they won't lift their head up.

Um, if they can't get their heads up off a tummy time after like two to three months. That's, that's usually a concern for me. The one that isn't a concern that I get asked about all the time is crawling.

Crawling is kind of a range. Some kids will do it at like six months, some kids we'll do at 10 to 11 months. And some kid will skip it altogether. It's really if you have the skills around it.

So crawling is great at building core strength and being able to move around. But other kids sometimes figure out other ways to do that. And as long as they are building that strength and moving, then I worry a little bit less about it.

And a lot of different things count as crawling, right? So it doesn't necessarily have to be all fours, typical crawling like their bum shuffle. Yes. Crawling backwards.

All those. Yeah, we think about it more of locomotion, like how you get from A to B. As long as you are able to get form A-to-B in some way, then that is a good sign.

Well, that's great, because those are, you gave us some signs that parents can look for really early on to look at baby's muscle tone to make sure everything is going okay and went to ask their doctor.

One in 26 people have epilepsy, so it is a fairly common condition, and I tell parents this all the time because, you know, whenever we do a new diagnosis of epilepsy we say, there's probably a kid in their classroom at school who has epilepsy.

And actually, like, even taking a step back, one in about 10 children, actually I think it's one and seven children will

have a seizure at some point.

which is very common. About 50% of kids, it's around 40 to 50%, will just have one seizure and never have a seizure again. So if your child has a seizures, its not an automatic, they have epilepsy.

Usually once you've had multiple seizures then we consider you as having epilepsy Yeah, is it still two seizures kind of buys you an anti-epileptic medicine for?

Yeah, we say two unprovoked seizures. So if there is another reason that we could say, oh, you had a seizure, so for example, if you're a diabetic and you have a really low blood sugar and that triggered you to have the seizure.

We don't count that towards your two. Infebrile seizures don't count. Correct. And febrial seizures are also a provoked seizure that we would not count, it's very common.

Once you have two, we will usually do some sort of evaluation. Usually you would see a neurologist that usually involves a brainwave test, an EEG. It may or may not involve imaging of your brain.

A lot of epilepsies are actually generalized and we call them idiopathic or genetic generalized epilepies. These are ones like people often use the term grand mal or GTC is generalized tonic clonic.

Those are fairly common genetic epilepsy syndromes. And just because they're genetic does not actually mean there's a gene. So I should, you know, say that too.

We just think that they are genetic and most kids will outgrow those. we typically do two years on a seizure medication. and then after two of being on the seizure, medication, and you've been seizure free, we do a trial off.

And some kids just never need a seizure medication again. The type of seizure that I get asked about a lot, especially in younger children, is staring spells or absence epilepsy.

A lot of overlap between absence, epilepsy and ADHD. And both of those things can have staring spells. And so I'll give kind of the what to look for. So absinthe seizures, this is the one where kids stare off for a few seconds and then come back to what they're doing.

These are very brief, so usually five to 10 seconds max. They will usually stop whatever they are doing stare straight ahead maybe stare slightly off and then come back to what they were doing like as if nothing happened.

Epilepsy Basics and Absence Seizures

It usually involves loss of time because during that these are generalized seizures so the whole brain is basically turned off for those five to ten seconds so they will not remember anything during After the seizure, they go right back.

They don't have the typical postictal after like a generalized larger seizure with body shaking. And they can sometimes have during the seizures things that we call automatisms.

So sometimes it can be like lip smacking. eye blinking and sometimes like grimacing, sniffing, things that are seem like they're automatic and they seem odd.

And they might not remember that. Then they go right back to doing what they are doing. longer spells, so things that are a minute plus usually we are less concerned with.

And the one thing you can do as a parent or a teacher is, calling somebody's name for a staring spell doesn't really break them out of it, even an inattentive one, but tapping on their forehead or even blowing into their eyes, if they blink and react, then you know it's not a seizure.

I get asked a lot about migraines. Should we talk a little bit about my grains? And I know like abdominal migraine is a new thing and cyclic vomiting syndrome, not that it's a thing that exists, but a knew like name for it.

Yeah. Migraines are super common. About one in five people have migrains, so it is one of the more common neurologic conditions. In general, a migraine for our classic definition is usually a unilateral headache.

It could be both sides, but usually starts unilaterally. it's a throbbing type of headache, It often comes with what we call photophobia, so sensitivity to lights.

Bonophobia sensitivity, to sounds. Nausea can sometimes have vomiting. They last usually like half an hour to a couple of hours and they often are treated pretty well by just ibuprofen.

I think there is often a misunderstanding about migraine. Migraine is a type of headache, not the severity of the headache. As a neurologist, I hear this all the time, a parent will come in with a child who is describing a migrain headache and then I'll ask the parents because they are typically genetic.

I said, do you have migraines? And they say no. and the visit will go on and they were like, well, I get like normal headaches. And I'm like well you also have migraines.

There's no such thing as a normal headache. Growing up I have my migraine myself and I had no idea I'd had migrane until medical school because my mom was always like oh yeah, we just get headaches, that's just like a thing.

It's funny me too actually. Yeah, same thing, figured it out in medical. But it happens to children. Oh yeah. I think once a year I diagnose like a handful of medical students with migraines because we'll talk about migraine and they'll be like, I don't have migranes and then they will describe their headaches to me and I'm like you have Um, but yeah, so, uh, and then there's migraines with aura, um, which various auras.

So the most common when we hear about is the visual aura, spots, wavy lines. Sometimes some people see like flashes of color. Um then, there are the more sensory auras.

And sometimes you'll get tingles down a, down an arm or a leg before, or a headache. Usually the auras are before, but they can be like during the beginning of the headache and then there are the more severe kind of hemiplegic type migraines where you can actually have weakness of like whole side of your body.

Those are typically genetic, those we absolutely look into a little bit more. But interestingly, in kids, so we talk about migraines, most of the time we think about it's very hard to describe this kind of headache.

But in Kids, there are a lot of things that we've actually found turn into migraine. So like you brought up abdominal migrain, cyclic vomiting, car sickness.

Migraines and Related Childhood Syndromes

I had that when I was a kid. There you go. Even colic has been tied to migraines. I mean, these are not like one-to-one like a kid with coli will have it.

But looking back, like, a lot of people with migraine had colics as babies and the rates are just higher. There are a couple of weird things in in late infancy, early toddlerhood that can be precursor to migraines.

So there's a condition called benign paroxysmal torticollis, where suddenly a kid will just turn their head to the side and could last like an hour. And it's like, what is going on?

And actually, they're having sort of this vestibular syndrome that they are trying to correct for. The other is a condition called paroxysmal vertigo of childhood.

It's also very scary. Kids, usually toddlers, will suddenly be unable to walk. They can have nystagmus or their eyes can be shaking and they will vomit with this.

And they just will turn pale. And they, we, a lot of times we end up admitting children with like this because it can be very scary when it first happens.

But these, these syndromes often if you have, so if have cyclic vomiting, if see these paroxysmal vertigo, there's a family history, strong family story of migraines.

We will sometimes treat it as migraine headache and see if that actually makes things better. Yeah, with those sorts of syndraumes, do you end supportively with like medicines that help with the nausea and vomiting and Yeah.

Usually in the young kids, we'll try acetaminophen and ibuprofen. Um, sometimes we will add like an anti-nausea medication as well. Some anti nausea medications actually work really well for migraines and even in absence of, um, some of those, uh, pain, typical pain relieving medications.

Like Zofran, right? Yeah, Zofran compazine actually works really well. But also for car sickness, right? Yes. Yes, it's one of those like, yeah, hits all the other receptors in the brain and the gut to help.

Yeah. It's all that. A little bit of all those serotonin receptors. For kids for older kids will sometimes use a board, we can use the mixture of a Board of Medications like triptan so like it attracts, and then for for younger kids.

We don't really have as many options. We typically don't do daily migraine medications unless the migraines are to the point where they are becoming debilitating.

In kids under the age of 10 or so, we don' have that many options. The main stay option that we use is usually superheptadiene periactin. It's an appetite stimulator, but it also works on all those serotonin receptors, so it does do really well.

With migraines and children, we tend to start with some of the basic, what we call lifestyle interventions. So the big five, I would say, are sleep, hydration, nutrition, caffeine, and exercise.

And that would be getting enough sleep. Especially kids, usually in the adolescent era, start to not sleep as well. School schedules. kind of change, circadian rhythms change.

And so there's often not as much sleep. Devices, social media, those kinds of things also add to that. So we usually say make sure that kids don't have their phones or devices when they're going to bed.

Eating three, nutrition, not so much as like, you know, eating the right foods, but just eating consistently. I would say the biggest trigger I see for a lot of kids is they don't eat breakfast in the morning.

Some kids don t even eat lunch at school. how they make it through the day. But that is a big thing. And then not drinking enough water, I would say like most teenagers, especially are just dehydrated all the time.

Kids in general dehydrate all time, you know, do they not want to go to the bathroom at school? There's usually a multitude of reasons, but just making sure they have a water bottle is a key.

And then drinking too much caffeine. Caffeine can help with headaches. It's interesting, a lot of elevated counter headache medicines have caffeine in them.

But if you overuse it, not only does it affect your sleep, it also causes a dependency on the caffeine and so you'll start having overused headaches, you have chronic daily headaches that are a little different.

Just improving exercise tends to be good for everybody. Thank you so much. Is there any other things we should talk about? I feel like we covered. I'll give you my little spiel on head trauma in toddlers so that way we cover it.

But because I get asked about this all the time, when do you need to worry about your kid hitting their head? I usually tell this to a lot of my parents all of the times.

Toddlers fall and older kids fall, and they hit their heads a lots. And I always say the skull is hard for a reason. There's a couple of red flags that you do need think about.

This is bring them to the hospital. Like just get them checked out immediately is one if they lose consciousness. So if their head and they are out cold That is something that you need to check on if They hit their and and are then nauseous and vomit afterwards.

That's something you should probably get checked and then the third one is just change in their So sometimes there will be a head injury and maybe they're dazed and a little out of it.

If that persists, that's definitely something you should check on. Most head injuries, they can cause some headaches, potentially lead to concussions.

But concussion is an interesting thing because it's not the degree of the head-injury. So anybody can get a concusion with a small head, injury versus a large head.

Head Injuries in Toddlers: When to Worry

So that's not really what we worry about. We worry more about, did they hit their head hard enough that they caused some bleeding in the brain? And if there is, do we need to act on it?

That's one thing to really make sure of. If a child falls, hits their head, cries for a minute, but keeps going and they're back to themselves, you can just kind of watch them and make sure they are okay.

Also, old wives tell that if you hit your head you need to keep somebody awake. That's actually bad for head injuries. As long as they didn't pass out to begin with, then you don't have to like keep them up all night to make they aren't going to.

A lot of kids do get tired after a head injury. They cry a lot and then they're wiped out and they want to sleep. So yeah, let them rest. With the vomiting, I tell parents two or more times, just because also a lot of young children, so like, toddlers fall down the stairs I feel like all the time or have similar type of falls and they'll cry and sometimes they get so upset while they're crying, they like gulp air and throw up.

So if it's that sort of a thing, that's like two more or times because one time could a lotta times just be that, if they are so up that they threw up Yeah, I tend to more think like if they're dazed and out of it and they just start vomiting, yeah, that's a little bit more scary than the hyperventilating.

I can't breathe and then, oh, throwing up. Yeah. And then also if their walking crooked or using one side of their body differently than they have a sudden personality change after a head injury, those are all kind of red flags they tell parents to watch out for.

I have learned that if a head injury is going to come with serious symptoms, it's always in the first 24 hours and typically in first six. Is that still a good guideline?

Yeah, that's generally the guidelines that we use. We often will, even if there is a head bleed inside the head for whatever reason, like a hematoma, hemorrhage, whatever, we typically will make sure that there's at least six hours of stability on imaging before we will say that it's stopped doing what it is doing.

But yeah, it that is pretty good. So yeah, if it happens at bedtime, maybe be safe and get it checked out or at least sleep in the same room as your child in case they are vomiting in middle of the night.

I feel like we covered like the entirety of pediatric neurology. This is amazing. Oh, I for only if only, oh my goodness.

But no, I'll give you some closing recommendations and this is just anything neurologic because we see a lot of weird movements.

We see. A lot. Of concerns always video, whatever you're concerned about. It is we live in an era where we have video machines in our pockets, which is what previous generations didn't have.

So. If it's a funny walk, if it is a weird behavior, it it a staring spell, something that's concerning for a seizure for you, just videotape it. It helps us immensely when you come in for visit.

People often, I can't tell you how many times, you see something and then you try to explain it and your explanation just changes and changes over time, especially as you're telling different people.

and it is just way more helpful if we see exactly what you are worried about.

Closing Advice: Always Record Concerning Symptoms

Awesome. Well, thanks. Everyone here, you should follow Dr. Vasadi on social media. That is where we first met in the first place, so we'll put some links below that people can find you.

You have so many amazing videos that are a minute long that just give so much information all at once. Thank you so for being here. This is really a pleasure.

And thank you for having me. I hope we covered enough for your listeners. Awesome, well, take care. and you can also check out my YouTube channel. I have lots of videos and shorts that will help you feel empowered as a new parent as I talk about all the common stuff that comes up in the first couple of years of life.

Thank you so much. Have a wonderful day.