Editor’s note

During May 3–4, 2019 Peking Union Medical College Hospital (PUMCH) International Congress on Spine Deformity & 1st International Early Onset Scoliosis Summit was held in Beijing, China with the focus on early onset scoliosis (EOS), adolescent idiopathic scoliosis, adult spinal deformity and complex spine deformity. During this forum, we are glad to interview Prof. Amy McIntosh to share her perspectives on early onset scoliosis (Figure 1).

Interview

BJI: Today, you had an excellent speech on “plaster treatment in EOS”, could you briefly introduce your ideas on this topic to our readers?

Prof. McIntosh: Sure. It’s my pleasure to accept your interview. Early onset scoliosis has many long-term consequences, and oftentimes the children that I treat need to have metal implants, like rods and screws placed into their spine at a very early age. And oftentimes it doesn’t just mean one surgery for them. It means multiple surgeries which then can have lasting consequences on how they function as an adult. Maybe even what jobs they consider doing as an adult. So, the plaster treatment of EOS really just means the non-operative treatment. And my talk really concentrated on a type of casting called Mehta casting. You can use these Mehta casts to modify or modulate the growth of a very young child’s spine. You can literally grow them straight. You can cure their scoliosis, which in my mind is incredible. No other treatment option exists that can cure the young child of scoliosis without having to place metal instrumentation. With repetitive, serial Mehta casting the child’s spine is encouraged to grow straighter over time (12–18 months). I find this to be a very intriguing concept. The problem is that doesn’t work all the time. You’ll see in my presentation, a case where I cure the child of their scoliosis. I have another patient where we basically do the exactly same treatment and it completely fails. She needed to have a MAGEC rod put in. My research questions revolve around that. What are the factors that lead to success or failure?

BJI: Are there any research projects underway that you would like to share with us? What can we expect?

Prof. McIntosh: Sure. At my hospital in Dallas, Texas (Scottish Rite Hospital for Children), we have lots of research in this regard. I think what I’m most interested in, you’ll see hints of it in my talk tomorrow, are we don’t get consistent success with our plaster treatment because maybe we don’t apply the cast the same way. Maybe we’re not doing the same exact maneuvers. We’re not cutting our windows the same. My research is really about how can we take all those factors and mitigate the differences between surgeons and institutions. So, in my mind, you should be able to put the same exact cast on in Beijing that I put on in Dallas, and we should have a way to measure that. I think we should measure how much traction force we put through the children. I think we should document this in a very clear fashion. How we cut our windows and why and how big the windows are, also where they’re placed. It’s just about quantifying how the cats are applied. And maybe if we can get a bunch of really good data from all over the country and world, we might be able to figure out how to have more surgeons use plaster to technically cure the young children of their idiopathic infantile scoliosis.

BJI: What leads you to the study or research of scoliosis?

Prof. McIntosh: I think it just comes down to that I enjoy technically doing scoliosis surgery. The more surgery you do, the more questions you have. You want to get the very best outcomes for your patients. You want every outcome to be great, one hundred percent of the time. So, i think the more you do the surgery and you see the patients, the more questions you have about how you can optimize their
surgical treatment and decrease any complication. And that pretty much drives most of my research questions. I'm very blessed at my hospital in Dallas. We have a very large research department and we’re very forward-thinking. We collect a lot of prospective data that is available for us to study and try to come up with really good answers to some hard questions.

BJI: What would be your suggestions for the college students who are pouring their lives into this field?

Prof. McIntosh: I think if you’re a college student and you’re thinking about medicine or research, I always say you don’t have to come up with the greatest research project or the greatest question. I think what you have to do is just have passion about what you’re doing. If research gives you joy, then follow that passion. You'll go down a path that eventually leads to amazing research. I don’t think this happens overnight. I think that it’s a journey and a process.

BJI: What you would like to do in the upcoming years both in life and in work?

Prof. McIntosh: I’m also a mom and a wife, of course. I want my children to be successful and have a wonderful life and career. But for me, in my work, I want to continue to take the best care of patients as I can, optimize their surgical outcomes and decrease their complications and do it in the most cost effective manner. My research is really more clinically driven. I’m also trying to find balance between home and work. I try to be fully present at home, and just concentrate on being the best mom and wife that I can be.

Expert’s introduction

Amy L. McIntosh, M.D., is a staff orthopaedist at Texas Scottish Rite Hospital for Children. In 1996, Dr. McIntosh graduated Summa Cum Laude from Central Michigan University with a Bachelor of Science degree in Sports Medicine. She received her medical degree at the College of Human Medicine at Michigan State University in 2001. In 2006, she completed her orthopaedic surgery residency at the Mayo School of Graduate Medical Education, College of Medicine. Dr. McIntosh is currently an Associate Professor of Orthopaedics at the University of Texas Southwestern Medical Center in Dallas. Dr. McIntosh is a fellow with the American Academy of Orthopaedic Surgeons and also a Candidate Member of the Pediatric Orthopaedic Society of North America. Dr. McIntosh has received numerous honors and awards, including the Senior AOA (Alpha Omega Alpha) Medical Honor Society in 2000. The following year, Michigan State University named her Medical Student of the Year. In addition, she served on the OREF Zimmer Resident Leadership Forum with the American Orthopaedic Association in 2006.

Acknowledgments

None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

References


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