Extremities Feature

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ORTHOPEDIC RESIDENTS TRAINED DIFFERENTLY THAN NEURO RESIDENTS IN SPINE? WHAT? // SLICK NEW SPINE CAGE TROM ISRAEL GOES IN “LIKE A SHIP IN A BOTTLE”! // AND MORE!

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Confusion in the Ranks: Variability in Spine Training Amongst Orthopedic and Neurosurgery Residents

Alan Daniels, M.D., an orthopedic surgeon at Brown University, isn’t comfortable with the variability that currently exists in residency training for spine surgeons. He tells *OTW*, “As opposed to, say, otolaryngologists or urologists, who have only one training pathway, spine surgery specialists have two. There are both orthopedic surgery residency and the neurosurgical residency pathways, each with their own strengths and weaknesses for training spine surgeons. Orthopedic trainees who specialize in spine surgery follow residency with a dedicated spine fellowship, whereas neurosurgery trainees often go directly to performing spine surgeries after residency. What makes this situation problematic is that some residency programs provide inadequate spine training. There is so much variability in the training for spine surgeons, and a lack of standards outlining adequate training for spine surgeons. This leads to a situation where some surgeons may be inadequately trained, and patients and other medical professionals become confused about the capabilities and areas of expertise of surgeons who perform spinal surgery in their communities.”

“To study spine surgeon training, my colleagues and I performed a study in which we assessed the Accreditation Council for Graduate Medical Education (ACGME) case logs of graduating orthopedic and neurosurgery residents from 2009 to 2012. We went into this knowing that orthopedic residents generally perform fewer spinal procedures than neurosurgery residents, however, we desired to explore the trends in spine training between and within each specialty. The average number of reported spine surgery procedures performed during orthopedic residency was 160; for neurosurgery surgery it was 375 procedures. It was not only the number of cases which differed between the specialties, but also the *types* of cases performed. We found a significant difference in the average number of spinal deformity procedures between graduating orthopedic surgery residents (9.5) and graduating neurosurgery residents (2.0). Also, we found that orthopedic residents do a higher proportion of instrumentation and fusion procedures compared to neurosurgery residents, who participated in proportionally more decompression procedures.”

“We also found a tremendous variability in spine exposure *within* the specialty. We examined the bottom 10% and the top 10% of graduates for spinal instrumentation or arthrodesis procedures, i.e., those who did the fewest and the most procedures. We found a 13-fold difference for orthopedic surgery residents and an 8.3-fold difference for

neurosurgery residents. This is concerning because the neurosurgery trainees in the bottom 10% are still going out and doing spine surgery independently, and with no additional training. In orthopedics, these trainees are likely poorly prepared for fellowship, and may or may not be adequately trained following spine fellowship.”

“One of the overarching issues is the ACGME accreditation for spine fellowships is currently voluntary and uncommon amongst spine fellowships. It is debatable whether ACGME accreditation improves fellowship training in any way; however, it is clear that there is little oversight of spine fellowships in both orthopedic and neurosurgery spine fellowships. This is problematic due to the fact that there is clearly variability in residency training for spine surgeons, and thus if this same variability exists among spine fellowships, some spine trainees may be inadequately trained to perform independent spine surgery at the conclusion of training. It is clear that we should monitor this problem closely, and we may wish to consider spine surgeon specialty certification. One important way to improve spine surgeon training would be to create a 3rd training pathway consisting of categorical spine surgery residency training which would decrease variability in training and allow for a focused and deliberate spine training experience. Although this is extremely controversial, spine surgery has clearly grown into a complex and complete medical and surgical field in recent years, and carefully considering the future of spine surgeon training is overdue.”

“Like a Ship in a Bottle”…New Cage a Success at TBI

A new spine cage provides a minimally invasive option—and it’s done through a tube. John Peloza, M.D. of the Texas Back Institute (TBI) has performed the first surgery in the U.S. using the FLXfit, one of the world’s first 3D expandable interbody cages. Dr. Peloza tells *OTW*, “The problem with traditional methods is that it puts the implant into a rectangular disc space; if you don’t create lordosis you are creating a segmental flatback, a problem because this distorts the mechanics of the spine. Our deformity colleagues have understood this for a long time. The surgeons who did degenerative spine work never appreciated this as much; then we found out about adjacent level disease and we always attributed that to a lack of motion in fusion. We didn’t like it, but we accepted it as a reasonable sequelae to the surgery.”

“With the advent of the anterior approach we became able to put in a large graft or implant and put it in with a trapezoidal shape (creating lordosis in the front). The problem with posterior lumbar interbody fusion (PLIF) or transforaminal lumbar interbody fusion (TLIF) is that they don’t create enough surface area for the graft, leaving you with nonunions and a lack of lordosis. This goes in like a ship in a bottle, i.e., the implant is built outside the body. You put the implant in through a tube then open it up. This expands the surface area and the front part of the implant and creates lordosis.”

“If you’re going to have something that expands then you need to put a mechanical device in that you can control from the outside. This fits the bill, and it opens up in two dimensions. The design was a challenge, in particular creating something that didn’t take up too much space for the graft. This patient was 63 and had undergone two previous laminectomies. I performed the surgery through an 18mm tube with the aid of an O-arm (thus avoiding fluoroscopy). During decompression I could refer to the anatomy on the computer; and sometimes scarring is helpful because with an O-arm you know where you are. There was hardly any blood loss and while it takes nearly as long as an open surgery, there is less trauma to the tissue so the patient recovers faster, experiences less blood loss and has less pain than those who undergo open surgery.”

Kathleen Weber, M.D. Voted Head of MLB Physician Group

The 60 voting members of Major League Baseball (MLB) Team Physician Association wanted the best and they found her. Kathleen Weber, M.D., an assistant professor of medicine and orthopedics at Rush University Medical Center in Chicago, has recently been named head of the MLB physicians group. Dr. Weber, already a member of the organization as a team physician for the Chicago White Sox and an active member of the MLB research committee, will assume the MLB Team Physicians Association presidency in 2016.

Dr. Weber, a member of Midwest Orthopaedics at Rush is board-certified in sports medicine and in internal medicine. She told *OTW*, “It is a thrill and an honor to have been selected for this position. In 2015 I will be attending medical advisory board meetings in New York and will be working towards organizing and holding the MLB Winter Meeting Team Physician Association/Professional Baseball Athletic Trainers Society Combined Academic Meeting that occurs each year in December. My leadership position and role on the Major League Baseball Medical Advisory Board will be devoted to the health and safety of Major League Players and baseball at all levels. I will assume the role of president in 2016.”

She notes, “In this role I plan to continue the strong leadership and accountability established from prior presidents

and continue to build upon the communication between the trainers, strength coaches, physicians, and all levels of the organization. It is important to me that I accurately represent all of the physicians involved in caring for professional baseball players.”

“The relevant issues that are discussed at the meetings include not only orthopedic issues that are common to baseball players but other medical conditions that our athletes may encounter. We need to be aware of medical conditions that may affect our athletes such as the recent report of mumps in a professional athlete group. We have many international players that may present with infectious exposure not seen in the U.S. such as a mosquito-borne illness. We also want to continue to work on injury prevention and delve more deeply into the nutrition side of things to ensure that the athletes are primed to deliver their best performances.”

Dr. Weber also serves as the head primary care sports medicine physician for the Chicago Bulls and is the head team physician for the DePaul University Blue Demons, Chicago Force Women’s Football and Malcolm X College.