Editorial

Why “Neurointerventions” for IR and Why Now?

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It's a Tuesday afternoon. A local orthopedic spine surgeon calls your office, “I have this patient with a T10 RCC met. I need to stabilize the spine, and it will be a bloody mess. Can you help us out?” You are not a fellowship-trained neurointerventional radiologist (NIR). Your answer is:

- (a) Sure, I did vertebral body embolizations in fellowship; I do it all the time.
- (b) No way man! I'm not a NIR.
- (c) I'd love to help. I did vertebral body embolizations in fellowship, but it may be a little too risky now. Let me think about it.
- (d) Never did it. But, I do trauma embolizations in same anatomic region. Let me think about it.

If you answered B, put this journal down. Politely demure and suggest your orthopedic surgeon consider a transfer of the patient or perhaps an attempt at the surgery without pretreatment. You should not perform interventions that *could* be considered NIR. You should also be lauded for your honesty, compassion, and *self-knowledge*. You should NOT feel that you are somehow a failure. You might consider discussing with your hospital or group the potential value of adding a staff member with the skillset your local orthopedic surgeon seeks.

If you answered A, read on. We're hoping to refresh your memory and maybe even provide you a few pearls.

If you answered C or D, this *Seminars* issue is designed for you! You were trained to do this sort of work. You can and you should use your knowledge and skillset to help as many patients as possible. Your work will make this patient's surgery much safer. You can really help this patient and the referring surgeon and will almost certainly further cement your already strong relationship with this referring provider. Before you perform your T10 embolization, and after reading this issue, you will probably begin by reviewing everything you can about spinal cord vascular anatomy. You should and probably will continue by rereading any texts or journal

articles you can about safe vertebral body embolization. You might even talk to a few IR colleagues about their experiences in this clinical arena. You will plan diligently, prepare meticulously, and perform a safe and effective arteriogram and embolization. You will follow up your patient after the spine surgery. You will also see your patient in follow-up in your office. You are an excellent IR and have added value to your health-care system.

Regardless of your answer, what you are *NOT* is a NIR. Though NIR is defined as “physicians providing neurointerventional management of patients with diseases of the brain, spine, head, and neck” by the vision statement of the Society of Neurointerventional Surgery (www.snisonline.org/mission), this edition does NOT propose to make you a NIR; reading it should not inspire you to begin coiling anterior communicating artery (ACOM) aneurysms or gluing cerebral arteriovenous malformation (AVMs) or spinal dural arteriovenous fistula (AVFs). It should rekindle your desire to help manage some clinical problems that share anatomic or pathologic features in common with those problems managed by our NIR brethren. These are the sort of issues that happen frequently and may go either untreated or treated in a delayed fashion if you don't help. Acute ischemic stroke, refractory epistaxis, arterial injuries from head and neck trauma, and severe back pain from compression fractures are diagnoses made every day at community hospitals and Level I trauma centers alike. Unfortunately, the former facility (and even some of the latter) may not have a NIR as readily available as you!

Intra-arterial (IA) acute stroke management is a great example of a “neuro IR” area in which IRs can really have more impact. At our institution, more stroke interventions are performed by IR than by our superb NIR team. Although our NIR section is well staffed, there are still only *two* NIRs available and they are essentially on call every other night for extremely complex clinical issues such as subarachnoid hemorrhage due to aneurysms, dural AVFs, and AVMs. Our system of on-call coverage entails IR performing initial diagnostic cerebral angiography and calling in the NIR if and when they

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are needed for management. If the eight non-NIRs at our institution *didn't* do IA stroke care, either many folks would simply not benefit from catheter-directed approaches or our NIRs would likely burn out and look for a better gig! Couple this with the fact that our stroke outcomes between the IRs and NIRs are equal, and, at least for our institution, the math becomes pretty simple.

Unofficial results of a recent Society of Interventional Radiology (SIR) stroke survey are interesting. The survey had 486 overall responders, all SIR members: 62% reported working in an accredited (primary or comprehensive) stroke center; 88% report that neurologists and 71% report that emergency department providers offer IV thrombolysis at their centers. Since only 64% of respondents report that their centers offer IA therapy, 36% of respondents' patients appear to be deprived of IA stand-alone or salvage approaches (which we find increasingly useful with drip and ship protocols and in the setting of failed IV therapy). Also, though

64% reported that their centers offer IA stroke care, 54% reported working in a setting with available NIR and only 35% reported that they provided IA stroke care *themselves*. This suggests that a significant amount of IA stroke management is done by services other than IR or NIR. Although drawing conclusions from this sort of survey may not be possible, keeping in mind the public health impact of acute stroke, it appears that non-NIR specialists are willing, capable, and indispensable in the management of this disease. Given our skillset and clinical acumen, shouldn't IR be one of these non-NIR specialties?

In the end, there's no reason why IRs can't have a positive effect in stroke management and a similar impact in other areas involving CNS anatomy. Certainly, assuming this mantle will take effort, education, and—let's face it—some risk. But, I wouldn't want myself or any of my family members to be the patient who needs that vertebral surgery done without an IRs help. Would you?