

Discussion to: Lower extremity malperfusion syndrome in patients undergoing proximal aortic surgery for acute type A aortic dissection



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Invited Discussant: Eric Roselli, MD^b

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Presenter: Dr Irsa Hasan



Dr Eric Roselli (Cleveland, Ohio). Dr Hasan, a really great presentation. These are the patients we need to get better at, patients with ischemia. So it's also a very important presentation. You alluded to it, and we found in our recent paper by Cassandra Back that the false lumen thrombosis in the iliac artery

sort of predicted the need for revascularization. And I appreciate your last slide there that you were missing some of that data. Did you notice any radiologic differences, though, in the aorta with regards to that dynamic component of obstruction?



Dr Irsa Hasan (Pittsburgh, Pa). It's a little bit hard because we had a lot of, again, missing data. So I can't really allude to something consistently that we saw. But there was some false lumen thrombosis in the distal aorta. And then we tried focusing more on the iliacs at that point. But really hard to differentiate between those two.

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Dr Roselli. Yeah, I think that's going to end up being really critical for us in the decision making about what to do. And I also thought it was interesting you had half of the patients get revascularized before and half after. And I realize that was a surgeon sort of decision you talked about. But did you notice any difference in some other outcomes, like the need for fasciotomy, whether they had their revascularization before or after?

Dr Hasan. We did not. The ones that required fasciotomies, I think we've also, in recent years have moved toward the trend of getting that fasciotomy done at the index operation. So, I think we've modified some of our approaches there just because the patients that end up with revascularization end up with a fasciotomy anyway. So, we've moved towards that.

Dr Roselli. And then I was also surprised that so many of these interventions were open, fem-fem bypasses, only a couple of stents. Most people are sort of moving to endovascular for this. And one of the advantages as I kind of alluded to earlier is that you can also address dynamic obstruction in the aorta at the same time. Do you take these patients when they have ischemia to a hybrid operating room? Do you have access to it? Do you think we should be doing that? Can you talk about that a little bit?

Dr Hasan. So this data is between 2007 to 2021. All of these operations are done by cardiac surgeons. I think in the recent era when we have more vascular surgeons that might be involved in our operations, we're going to be maybe moving towards that stenting. So, I think that there's also a dynamic to how we're managing these patients. All of these ones were done mostly in an open aortic setting. So, I think that's going to change in the future.

Dr Roselli. Yeah, I think we definitely need to kind of make that movement. And finally, I have one question. We saw in the Beck series that a third of these patients had other vascular beds, and you also pointed out that you had a lot of other vascular beds that are a risk. I was surprised—I suppose it's because the numbers are small—that this didn't correlate with your outcomes.

Dr Hasan. Yeah. We really didn't, surprisingly, yeah, I'm not sure. I think that warrants more investigation because I don't know why that—I was surprised that we didn't find that.

Dr Roselli. You did see more renal failure in the patients with [crosstalk], didn't you?

Dr Hasan. We did. And so half of those patients that ended up with new onset renal failure did have recovery of their renal function by the time they were discharged. So, I think that, again, that also did improve. So it's hard to know.

Dr Roselli. Really, a great presentation. If I could just make one comment, if you guys will allow me. Something we've done in our center that I think has made a huge difference in the last few years is when these patients come in with limb ischemia, because you can't tell what's going to happen to them, is we immediately take our arterial line and Y it and stick a perfusion cannula in a cut down in the groin, just like you would if you have a patient on ECMO with like a 7 French sheath or something like that. And I don't think we've done a fasciotomy since we've done that. We've intervened upon a lot of iliac arteries and aortas in those ischemic patients, but we've been able to really kind of get those legs perfused simultaneously. Instead of this idea of what you do first, we kind of get them perfused at the same time. And I think that's been a really nice thing I wanted to share with everybody.

Dr Hasan. Interesting. Great. Thank you.

Unidentified Speaker 1. Thank you.

Unidentified Speaker 2. Thank you for your great presentation. My name is Kim from South Korea. I agree with your conclusion. And maybe the presence of arterial thrombosis and reverse collateralization is important for these patients. But maybe the intensity is also another important point. So, did you check any lactate level or evaluate any communications between the time of the myoperfusion on your study outcome?

Dr Hasan. We did not. As far as the lactate and those findings, these are mostly evaluated just clinically. So, after typically our type A repair, we will clinically evaluate the leg and go from there. But we didn't study that in this group,

but I think that's very relevant for our determination postoperatively.

Unidentified Speaker 2. Thank you.

Unidentified Speaker 3. Very nice presentation. One question, one comment. The question was the fasciotomy group was more common among those who got the revascularization pre or post?

Dr Hasan. Post.

Unidentified Speaker 3. Post. And my comment was in line with Eric. We actually, for these patients that come with type A dissection. They have myoperfusion. We take a [inaudible] perfusion cannula, exactly like an ECMO. it's 6-French, get it into the cephalic artery that is ischemic, and connected it to the arterial line, right? The hub of it. And the whole time of the procedure, that leg is getting perfusion. At the end, get an angiography, we'll see if there's limb ischemia going on or not. If it is, I stent it. And I agree with you, Eric, we haven't done a fasciotomy or fem-fem bypass for a long, long time now. But a very nice presentation.

Dr Hasan. Thank you.

Unidentified Speaker 1. I was wondering for the audience, if you have a patient with acute type A aortic dissection and the patient does not have pulses in one of the lower extremities, how many of you may do a central repair before they do anything with the leg? Interesting. How many do they do a fem-fem bypass or any procedure first for the legs before they do the central repair? Interesting. And how many they do simultaneously what actually Eric very well suggested? Interesting. So, it seems that most of the surgeons still prefer to do a central aortic repair when somebody presents like this. But Eric, your comment was very well received. Good. Thank you.

[applause]