See Article page 1142.

Commentary: One more thing to complicate lung transplantation

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There is little doubt that the harder you look, the more you find. The paper by Jorge and colleagues¹ in this issue of the *Journal* once again reminds us that this axiom, although tired, seems to be universally true. This very experienced group has shown that prevalence of deep-vein thrombosis (DVT) in their lung transplant population was doubled by the institution of a defined protocol of duplex screening of lower extremities immediately post-transplant and then again at 2 weeks out when compared with an unscreened cohort. Although screening for DVT is not a particularly new or novel concept, its application to this unique population is of particular interest. After all, the recovery of a patient undergoing lung transplant is complicated enough!

I suspect that in these types of studies the real issue is not that we found more, but whether this translated into finding less (mortality/morbidity). It's hard to tell in this study, although the authors do suggest that there is a trend of improved outcomes in the modern era, after screening was instituted. Because of the time confound, however, it is hard to know whether improved patient outcome is the result of screening or of 1 or more of the other numerous unquantifiable changes that almost certainly have occurred from one era to the next.

Still, this is a provocative study that makes me wonder about several things. First, is there concordance between bedside duplex studies and those done in the vascular laboratory? There is always concern that a mobile study may be inferior immediately after transplant, where a groin may have been (or is still) cannulated, complicating the study. It was unclear to me whether every DVT found at day

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CENTRAL MESSAGE

DVT screening after lung transplant works. Now what?

0 was reidentified at day 14. It seemed as though there were fewer reported 2 weeks after surgery, raising concern about concordance of the studies.

Second, what about upper-extremity DVTs? All of these patients would have had large-bore central venous lines for at least a day or two, if not pre-existing veno-venous cannulae, and there is clearly risk of catheter-related thrombus in this population. Why leave this out of a screening protocol?

Finally, with an almost 20% incidence of DVT, why not anticoagulate (or perhaps discharge with prophylaxis) the whole group? The authors point out the procoagulant impact of sirolimus/everolimus and the 28 DVTs thought to be secondary to these medications that were excluded from the study. Anticoagulating the whole lot doesn't seem like such a bad idea.

This study sheds light on an important epiphenomenon that cannot simply be ignored, despite the myriad other events that complicate recovery from lung transplantation. There does appear to be the suggestion of a tangible benefit for patients, and that is never a bad thing. I think that this is just the starting point in regard to screening for DVT in this population. Where it ends is anyone's guess.

Reference

1. Jorge A, Sanchez PG, Awori Hayanga JW, Pilewski JM, Morrell M, Tuft M, et al. Routine deep vein thrombosis screening after lung transplantation: incidence and risk factors. *J Thorac Cardiovasc Surg.* 2020;159:1142-50.

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