What Data Are Needed to Support Transradial Access in Peripheral Interventions?

Christoph A. Binkert, MD, FCIRSE, FSIR, discusses the potential of a radial approach to lower extremity interventions, as well as the available data and the level of evidence required to further expand this technique.

What are your feelings about the opportunities for radial access for lower extremity revascularization?

I like to differentiate between patient benefit and current technical challenges. There is no doubt that patients could benefit from a radial approach because of immediate ambulation after treatment and also because complications are less likely at the puncture site. On the other hand, there is a lack of suitable devices to reach the popliteal artery and even fewer that reach the crural vessels. In addition, every exchange over a distance between 150 to 200 cm is very cumbersome. With the right tools, the radial approach has the potential to become the access of choice.

How would you describe the body of evidence supporting transradial access in general?

Quite a bit of cardiology literature shows a main benefit of reduced access site complications despite antiplatelet therapy and/or anticoagulation. In the interventional radiology field, large randomized studies are not available. However, several case studies support the use of a radial approach. In daily practice, the radial approach is very helpful if the radial artery diameter is at least the size of the outer diameter of the introducer sheath and if no or few catheter/wire exchanges are needed, such as in visceral embolization procedures.

To what degree do you think data from coronary transradial experience can be extrapolated to other vessels and procedures, including infrainguinal disease?

As far as the access to the radial artery itself is concerned, I think that the experience from the coronary literature can be extrapolated to peripheral procedures. The main difference is the distance to the treatment area. The current sheaths and guiding catheters are long enough to reach the coronary arteries. The infrainguinal arteries can be more than 200 cm away from a radial access site. Therefore, balloon catheters and stent delivery systems have to be longer than 240 cm. Unfortunately, such systems are not available yet.

What are the strengths and shortfalls of the data regarding peripheral embolization and other interventional oncology procedures? Can these experiences be informative in lower extremity revascularization?

I don't believe that the clinical outcome is very dependent on the access site. No one has looked at the difference between a right common femoral approach versus a left common femoral approach or even a superficial femoral approach. As long as the interventionalist can reach the treatment area, the procedure should be possible from any of these locations. The question of reachability (from radial vs femoral approach) should be investigated, including procedure and radiation time. Unfortunately, there are very few dedicated catheters for radial access, which places the radial approach at a disadvantage.

What level of data is necessary to adequately support transradial access for lower extremity revascularization?

Unfortunately, I believe it is too early for such a study because of the lack of suitable tools. The next step could be a multicenter registry with dedicated materials. Once the best technique is established, a randomized controlled trial would be very interesting. ■

Christoph A. Binkert, MD, FCIRSE, FSIR
Department of Radiology, Interventional Radiology
Cantonal Hospital Winterthur
Zurich, Switzerland
christoph.binkert@ksw.ch
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