

Choosing Radial vs. Femoral Cardiac Catheterization: Does Operator Seniority Matter? A Single Center Experience

Nitin Verma MD

Lehigh Valley Health Network, Nitin.Verma@lvhn.org

Amit N. Nanavati MD

Lehigh Valley Health Network, Amit_N.Nanavati@lvhn.org

Justin D. Roberts DO

Lehigh Valley Health Network

Nainesh C. Patel MD

Lehigh Valley Health Network, nainesh_c.patel@lvhn.org

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Choosing Radial vs. Femoral Cardiac Catheterization: Does Operator Seniority Matter?

A Single Center Experience

Nitin Verma MD, Amit Nanavati MD, Justin Roberts DO, Nainesh Patel MD

Division of Cardiology, Lehigh Valley Health Network, Allentown, Pennsylvania

Background

Numerous studies in the recent literature have suggested that radial artery cardiac catheterization for angiography is a safe and effective alternative to traditional femoral artery cardiac catheterization.

However, radial artery cardiac catheterization is only being sporadically adopted.

In fact Rao et al notes that only 3.5% of PCIs were performed radially in the first quarter of 2007.

Kern notes many factors that could explain reluctance in adopting radial technique, namely increased procedure time and radiation exposure.

Kern also hypothesizes that operators over the age of 50 may

not be willing to entertain this new approach for a variety of reasons including increased versatility of the femoral approach and improved femoral vascular closure devices.

Methods

The study seeks to examine practice patterns at Lehigh Valley Hospital, an 880-bed community hospital located in Allentown, PA.

Approximately 2760 cardiac catheterizations are performed annually at this center by 9 operators.

We examined 302 patients presenting for cardiac catheterization from July to August 2011.

Excluded were cases requiring femoral approach for intra-aortic balloon pump placement.

We compared the percent of cases performed via the radial approach by operator with the years since initial board certification in Cardiology for that operator.

Results

In our analysis, we analyzed data from 302 consecutive catheterizations for the month of July and Aug 2011 at a high volume catheterization lab.

Nine operators ranging from 3-32 years of experience were included. The median number of cases performed per operator were 33.6 (23-38). Data was divided into the most junior (<8 years) and the most senior (>20 years) operators. The junior staff performed a median of 47.5 (41.8-53.3) cases, and of those 54% (n=51) were radial and 46% (n=44) were from femoral approach.

The senior staff performed a median of 28 (21-34.5) cases, and of those 28% were from the radial approach and 72% were from the femoral approach. There was a significant difference in the number of radial cases performed $p=0.04$ (25.5 vs 9.3) with no

significant difference in femoral cases $p=0.73$ (22 vs 20.3).

Discussion

This data suggests that the more junior staff are performing a significantly higher number of radial access catheterizations versus their senior colleagues.

The years since completion of fellowship training may have a significant influence on site selection. Demographic factors, total operator volume experience, and complications were not examined.

Conclusion

Approach for cardiac catheterization varies with the age and seniority of the operators at our institution. Further analysis of demographics and the longitudinal patterns needs to be addressed to evaluate if this is an isolated institutional phenomenon.

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