ROLE OF ECHO DOPPLER IN DETECTION OF RADIAL ARTERY ANOMALIES PRIOR TO TRANSRADIAL ACCESS FOR INTERVENTIONS

i2 Poster Contributions
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Background: Transradial access for interventions offers many advantages over the femoral access. However, this can be complicated by procedural failures, especially when encountered with radial artery anomalies. We aimed to prospectively evaluate whether the anatomic variations of radial artery can be identified accurately by ECHO-Doppler prior to the procedure.

Methods: 250 consecutive patients undergoing interventions via transradial access in our institution from 01 April 2008 were enrolled into the study. All patients were screened pre procedurally by ECHO-Doppler and the presence of radial artery anomalies were documented, which were confirmed by radial arteriography. The incidence of procedural failure and need for alternative access was studied in these patients.

Results: Out of 250 patients, radial artery anomalies were documented in 16% (n = 42).

15 (6%) patients had abnormal bifurcation of the brachial artery, 5 (2%) had an aberrant accessory radial artery, 11 (4.4%) had the presence of a radial loop, 4 (1.6%) had highly tortuous radial artery, atherosclerotic stenosis was present in 4 (1.6%), and 2 (0.8%) patients had hypoplasia of the radial artery. All findings were confirmed to be accurate by radial arteriography. None of the patients with normal radial anatomy needed an alternative access where as it was required in 9 (3.6%, p<0.0005) patients with radial artery anomalies. In these patients the incidence of spasm and other vascular complications were higher (5.2% Vs 15.9%, p= 0.017).

Conclusions: Radial artery anomalies are relatively common. Pre procedural ECHO-Doppler screening can predict procedural complications and the need for alternative access in patients undergoing transradial interventions.