OCCLUSION OF THE RADIAL ARTERY. REALITY OR MYTH.

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MAIN STUDIES OF THE RADIAL APPROACH


...reduced costs [Caputo RP et al. Catheter Cardiovasc Interv 2011;78:823–839].


Representative sections of the RA showing different histopathological findings

METHODS FOR REDUCING THE RISK OF RAO

1. Performing an US before intervention. (Check diameter, tortuosity, looping and high origin of RA).
2. Adequate anticoagulation
3. Prevention of spasm (analgesia + sedation + spasmolytics + hydrophilic coating + low profile)
5. Using low profile, hydrophilic introducers and catheters.

BUT WHAT ELSE CAN WE DO TO PRESERVE THE ACCESS ARTERY PATENT??


The Society for Cardiovascular Angiography and Interventions Expert Consensus
2013

- dorsum of hand
- anatomical snuffbox
- typical point
The main idea of the **DISTAL** radial approach – is the preservation of antegrade blood flow in the superficial Palmar arch in case of occlusion of the RA in the anatomical snuffbox area.

**SIMULATED CASES IN ONE PATIENT**

- Occlusion of ulnar artery
- Occlusion of radial artery on the forearm
- Occlusion of radial artery in the snuffbox area
Total number of catheterizations (2013-2017)

- RA typical: 3037
- Ulnar artery: 1242
- RA snuffbox: 4076
- RA dorsum of hand: 345

Arterial patency control (average follow-up = 4m)

- RA typical: 1174
- Ulnar artery: 1257
- RA snuffbox: 444
- RA dorsum of hand: 122
It was taken into account both the occlusion of the RA on the forearm and local occlusion in snuffbox area.

INCIDENCE OF ARTERY OCCLUSION

- RA typical (n=55): 4.5%
- Ulnar artery (n=15): 3.4%
- RA distal (snuffbox+dorsum of hand) (n=26)*: 2.0%

0.8% - local occlusion in snuffbox area
1.2% - RA occlusion

* It was taken into account both the occlusion of the RA on the forearm and local occlusion in snuffbox area
WHY SHOULD WE RECANALIZE ASYMPTOMATIC RADIAL OCCLUSIONS??

The growth of cardiovascular morbidity and the development of interventional cardiology lead to an increase in repeated interventions.

Radial approach is currently dominant

WE REQUIRE PATENT RA FOR FURTHER INTERVENTIONS (incl. coronary graft, fistula for hemodialysis or invasive monitoring).
RA occlusion, before and after recanalization
38 RAO recanalizations

31 success (81% success)
- 20 antegrade recanalizations (trans-ulnar): 74% successful
- 11 retrograde recanalizations (trans-snuffbox): 100% successful

7 failure (19% failure)

REOCCLUSION
- 20% of antegrade recanalizations
- 67% of retrograde recanalizations
RA immediately after recanalization & angioplasty. OCT-imaging.
Of course, RA occlusion is a severe REALITY, but we have to fight against it. To preserve RA patent, we can:

1. Use techniques to decrease the risk of occlusion
2. Use distal radial and ulnar approaches
3. Recanalize RAO. Trans-ulnar access is safe in these cases
THANK YOU FOR ATTENTION
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