

## Radial vs femoral access for superselective TAE of unresectable HCC: a comparison of feasibility and patient discomfort

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### Background

Previous reports indicate transradial access (TRA) as safe and better tolerated by patients than transfemoral access (TFA), however it is rarely used in superselective transarterial hepatic embolizations (TAE). We aimed to compare safety, efficacy and tolerability of TRA vs. TFA in patients with hepatocellular carcinoma (HCC) undergoing TAE.

### Methods

In this retrospective, single-center study we reviewed all TAEs performed for HCC from 1<sup>st</sup> December 2018 to 1<sup>st</sup> August 2019. The primary endpoint was to compare TRA and TFA in terms of pain reported by patients at the access site, postoperative discomfort, and access-related complications. Secondarily, we evaluated differences in procedure duration. Primary technical success was defined as the ability to perform TAE without switching to another access site, secondary success after a route switch.

### Results

We performed 71 procedures on 52 consecutive patients, 40 with TFA and 31 with TRA. Primary technical success was 80.6% for TRA and 92.5% for TFA, secondary success 100%. No failures were observed. TRA patients reported significantly less post-procedural discomfort than those in the TFA group ( $p=0.0002$ , Mann-Whitney test). No significant differences were noted concerning pain at the site of access, nor in procedure time. Seven (10%, TRA=3; TFA=4) hematomas at the access site were observed, all treated conservatively.

### Conclusions

TRA is a feasible alternative to TFA for transarterial liver embolization, with a slightly lower primary success rate, no increase in procedural length or access-related complications, and improved patient comfort. A learning curve for TRA should be expected.



Successful angiography performed via the left radial artery in a patient treated for multinodular HCC with superselective transarterial liver embolization. The patient had no access-related complications and reported no discomfort after the procedure.



Selective angiography of the right hepatic artery showing a large HCC nodule in S6.