

## Learning curve of the transradial approach of percutaneous carotid intervention

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**Purpose:** Recently transradial (TR) approach became a safe and effective alternative of percutaneous carotid intervention. We report the learning curve over 6 years in two high-volume interventional centers during the transition from transfemoral (TF) to transradial approach.

**Patients and methods:** Between 2010 and 2015, 1773 patients underwent carotid intervention in our centers. Clinical characteristics, radiation doses, volume of contrast material, screening and procedure times of consecutive patients were recorded prospectively in a register and retrospectively analysed.

**Results:** Transradial approach was applied in 494 patients, mean age was 68±8 years, 67% of them was male. The ratio of TR has grown from 3 to 7, 25, 43, 48 and 60% of the carotid interventions, during the years respectively. While the duration of the procedure (26, 30, 25, 25, 22.5, 25 min), the fluoroscopy time (11, 11, 10, 8, 8, 9 min), and the applied contrast material (128, 142, 95, 69, 90, 75 ml) has significantly decreased in the first 4 years, then an elevation is observed, as more complicated cases were enrolled. Significant improvement was observed after the first 50 cases, in each parameter. Conversion to TF was needed in 7.5% and did not change significantly. No difference was observed in the incidence of minor or major vascular events and hospitalization days, over the years.

**Conclusion:** An initial learning curve was observed in the intervention parameters of transradial carotid stenting. The transition from TF to TR approach is achievable in 50 cases in experienced centers.