

**PN-6**

**Brachial venous access for electrophysiological studies in pediatric patients**

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Femoral vein is the most used vascular access to perform electrophysiological studies (EPS) to explore conduction tissue. In certain patients, though, femoral access is not possible, such as severely impaired neuromuscular disorders. Adult pneumologists have been using brachial venous access to perform pulmonary hypertension studies, avoiding discomfort and sedation, and short hospital stay.

We aim to analyse the use of brachial venous access to perform EPS in pediatric population whose femoral access is not feasible.

We performed a prospective study of all 14 cases cases that femoral venous access was not possible in paediatric population. In all cases neurological impairment with severe hyperflexion of the pelvic area was the reason for performing an alternative access. Brachial access was obtained using a peripheric catheter and exchanging it by a 5F introducer. In all cases 5F tetrapolar stimulation catheter was used. Venous valvules could be passed with the stimulation catheter. In case of sharp angulation, abduction movement of the arm helped to advance the catheter. EPS could be easily performed in all cases either by direct movement of the catheter or whole-circle in the atrium. Hiss analysis was the most difficult to achieve, and the catheter is not made thinking of this special acces, but preceding pre-angulation of the tip of the catheter could help to improve the shape of the angle to obtain nice Hiss signals. Finally, patients could be discharged 1 hour after the procedure with no complications.

Alternative venous accesses as brachial can be easily adapted to pediatric population and used in special cases when femoral access s not feasible.