

## **CHOICE OF AN APPROACH IN ABLATION OF LEFT-SIDED ACCESSORY PATHWAYS**

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*This study shows comparative data for the transseptal and retrograde aortic approach in a consecutive series of patients undergoing catheter ablation of left antero-lateral accessory pathways. Although the success rate and the rate of complications were the same for both, fluoroscopy time was shorter and a mean number of radiofrequency was less in patients who had transseptal approach.*

**Key words:** *catheter ablation, trans-septal approach, left sided accessory pathways.*

There are two main approaches employed to ablate left-sided accessory pathways (AP): the retrograde arterial approach and the atrial transseptal approach. The decision regarding use of arterial or transseptal approach is based on physician preference and familiarity with the technique. The two approaches are complimentary, but (commonly) in fact operating electrophysiologist use predominately only one approach for ablation in all localizations. In our opinion catheter manipulation in left antero-lateral region (between 12 and 3 o'clock on LAO projection) might be easier with the transseptal approach. In the present study we sought to evaluate the benefits of transseptal approach in ablation of antero-lateral AP.

**Methods** We studied 37 consecutive patients who underwent ablation of left-sided AP; 14 of them had antero-lateral localization. In patients with manifest pre-excitation localization of AP was predicted on criteria proposed by Moss et al. (2010) – the ratio of QRS amplitude in lead II to

lead III  $\geq 1$  is suggestive for antero-lateral AP. In patients with concealed AP its location was based on the search of place with the shortest interval QRS-A on the coronary sinus catheter during orthodromic tachycardia. In 7 of the patients with the antero-lateral localization of AP retrograde approach was employed, in another 7 – transseptal approach was used.

**Results** All 14 AP were successfully ablated in one session. In any case there was no crossover from one approach to another. There was no difference in median total procedure time ( $65 \pm 28$  min vs  $62 \pm 21$  min ( $p=0,85$ )). Fluoroscopy time was on significantly longer for the retrograde compared with the transseptal method ( $32 \pm 5$  min vs  $19 \pm 3$  min ( $p < 0,05$ )). A mean of  $6,5 \pm 2,3$  applications of radiofrequency current were used in patients with retrograde approach versus  $1,3 \pm 1,2$  for those with transseptal approach ( $p=0,05$ ). There have been no complications. There have been no recurrences of AP conduction during mean  $6 \pm 2$  months of follow-up.

**Discussion** The rates of success for left free-wall AP are typically greater than 95% [ 2 ]. In our study both the retrograde and transseptal approaches can be safely and successfully employed to ablate left antero-lateral AP. Although the success rate of either approach was similar fluoroscopy time was shorter for the transseptal method. A mean number of radiofrequency applications was less in patients who had transseptal approach. The likely explanation for this finding is that catheter manipulation in antero-lateral region was easier along the atrial than ventricular aspect of the mitral annulus. Although transseptal puncture required a bit more time than obtaining arterial access, total procedure time was similar.

**Conclusion** Transseptal approach may be recommended for ablation of AP in left antero-lateral localization.

## **Literature.**

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## **ВИБІР ДОСТУПУ ПРИ КАТЕТЕРНОМУ УСУНЕННІ ЛІВОСТОРОННІХ ДОДАТКОВИХ ПЕРЕДСЕРДНО-ШЛУНОЧКОВИХ СПОЛУК**

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*В роботі порівнюються дані процедур з усунення лівих передньолатеральних ДПШЗ, виконаних за допомогою трансаортального або трансептального доступу. Хоча обидва доступи виявились ефективними і безпечними, час експозиції та середня кількість нанесених аплікацій була меншою при процедурах, виконаних із трансептального доступу.*

**Ключові слова:** катетерна деструкція, трансептальний доступ, лівосторонні додаткові передсердно-шлуночкові з'єднання (ДПШЗ).

## **ВЫБОР ДОСТУПА ПРИ КАТЕТЕРНОМ УСТРАНЕНИИ ЛЕВОСТОРОННИХ ДОПОЛНИТЕЛЬНЫХ ПРЕДСЕРДНО- ЖЕЛУДОЧКОВЫХ СОЕДИНЕНИЙ**

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*В работе представлены сравнительные данные процедур по устранению левых переднелатеральных дополнительных предсердно-желудочковых соединений (ДПЖС), произведенных из трансаортального*

*либо из трансептального доступов. Хотя оба доступа оказались одинаково эффективными и безопасными, время рентген-экспозиции и среднее количество нанесенных аппликаций были меньше при процедурах, произведенных из трансептального доступа.*

**Ключевые слова:** *катетерная деструкция, трансептальный доступ, левосторонние ДПЖС.*