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Simplified Method for Insertion of Steerable Guide into the Left Atrium Using a Pigtail Guide Wire During the MitraClip® Procedure: A Technical Tip

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HIGHLIGHTS

- This retrospective, single-center study compared two techniques for maintaining left atrial access while exchanging the 22F-transseptal steerable guide catheter (SG) into the left atrium during MitraClip® procedures. The standard technique of using a 0.035" stiff guidewire anchored in a pulmonary vein (PV) (n=18) was compared to the use of a 0.025" pigtail transseptal wire (n=21).
- Exchanges performed using both the standard technique and pigtail wire did not result in any crossing failures. However, two cases of pulmonary hemorrhage were observed in procedures where a stiff guidewire was anchored in a PV while procedures with the pigtail wire were complication-free. This in an important safety concern in procedures such as MitraClip® where prolonged anticoagulation may exacerbate risk of bleeding.
- With a pigtail wire, the average time required to place the SG in the left atrium was reduced by 13 minutes (Figure 1, $p<0.001$) compared to the stiff guidewire.
- The results of this investigation indicate that a pigtail wire offers the necessary support for exchange in a safe and markedly accelerated manner compared to using a stiff guidewire. Use of a pigtail wire was therefore recommended for structural heart procedures such as MitraClip® in which procedure time and safe maintenance of left atrial access are key considerations.

Procedure Time

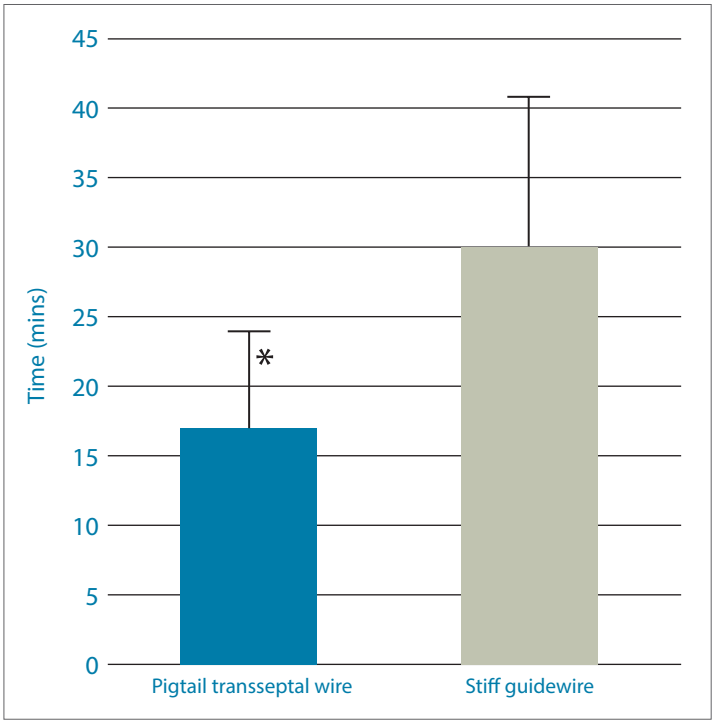

Figure 1. *Time required to place the SG in the left atrium using the traditional technique with a stiff guidewire vs. a pigtail transseptal wire (error bars represent standard deviation, * $p<0.001$). Placement time was defined as the time between the successful transseptal puncture and the positioning of the SG.*

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