

Title: RETROFLEXED CATHETER COURSE REDUCES THE RISK OF RIGHT FREE WALL ACCESSORY PATHWAY RECURRENCE

Authors: Robert Przybylski, Elizabeth S. DeWitt, Omar Meziab, Audrey Dionne, Edward T. O'Leary, Mark E. Alexander, Edward P. Walsh, Douglas Y. Mah

Boston Children's Hospital, Department of Cardiology, Boston, MA, USA

Presenting author contact details: Robert.przybylski@cardio.chboston.org, 248.217.9186, 161 S. Huntington Avenue, apartment 229, Boston, 02130

Objectives

Accessory atrioventricular pathways (APs) may mediate atrioventricular reciprocating tachycardia and, in some cases, have the potential to conduct atrial tachycardia rapidly, which can be life threatening. While catheter ablation can be curative, ablation of right free wall APs is associated with a high rate of recurrence, likely secondary to reduced catheter stability along the right free wall atrioventricular groove. Here we sought to identify characteristics associated with a lower rate of recurrence.

Methods

We performed a retrospective chart review of patients who underwent catheter ablation of a right free wall accessory pathway from January 1, 2008 through June 1, 2021. Patients were included if duration of follow up was >2 months. Cox proportional hazards regression was used to identify relationships between predictor variables and AP recurrence.

Results

We identified 95 patients who met inclusion criteria. Median age was 13.1 years and median weight at ablation was 52.3 kg. Overall, recurrence occurred in 23/95 (24%). The only variable associated with reduced likelihood of AP recurrence was use of a retroflexed catheter course approaching the atrioventricular groove from the ventricular aspect. This approach was used in 24/72 (33%) patients without recurrence and only 1/23 (4%) of patients with recurrence (HR 0.13, 95% CI 0.02-0.95).

Conclusions

Use of a retroflexed catheter course was the only variable associated with reduced likelihood of AP recurrence. This approach results in improved catheter stability and should be considered for ablation of right free wall APs.

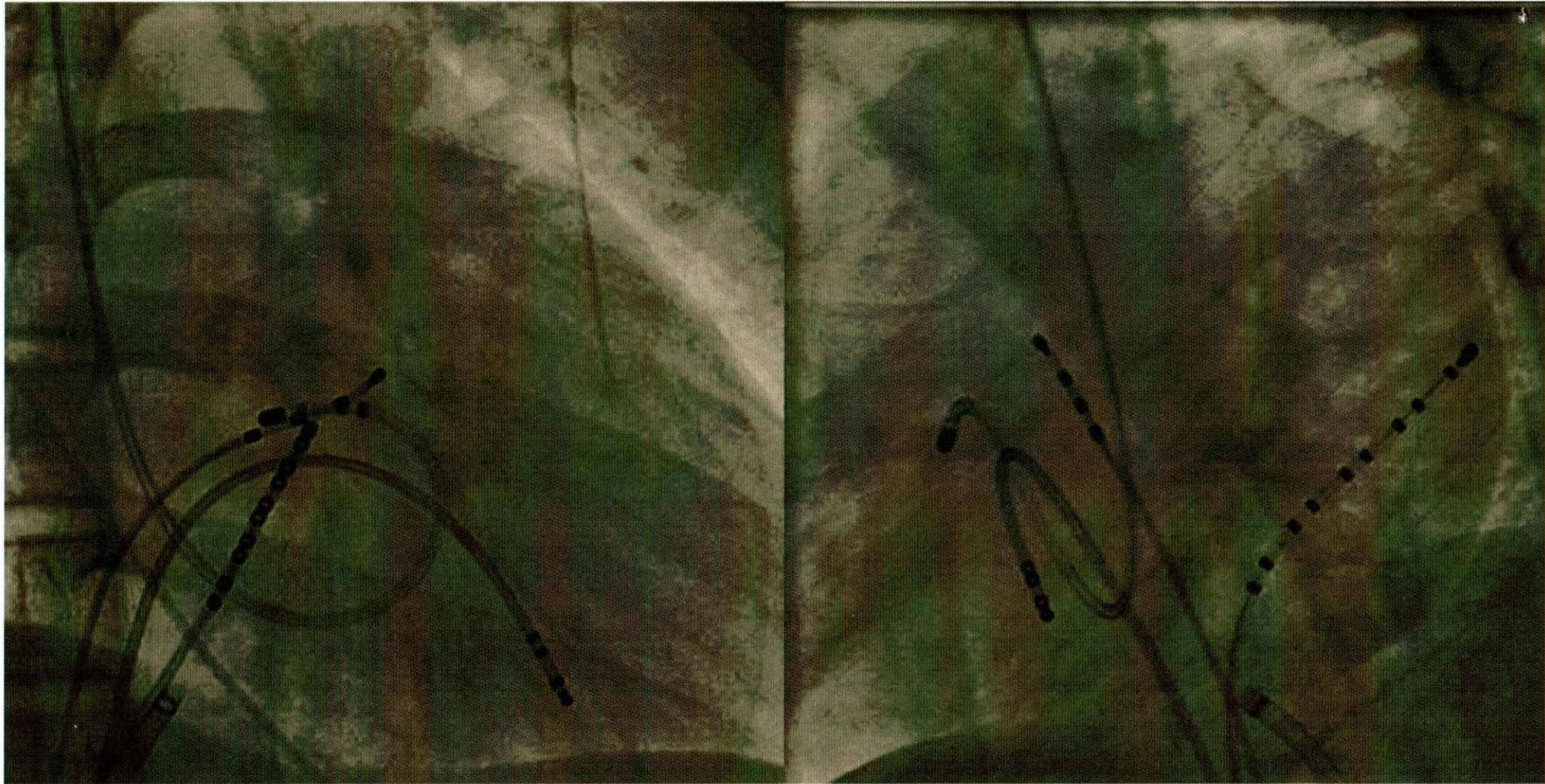
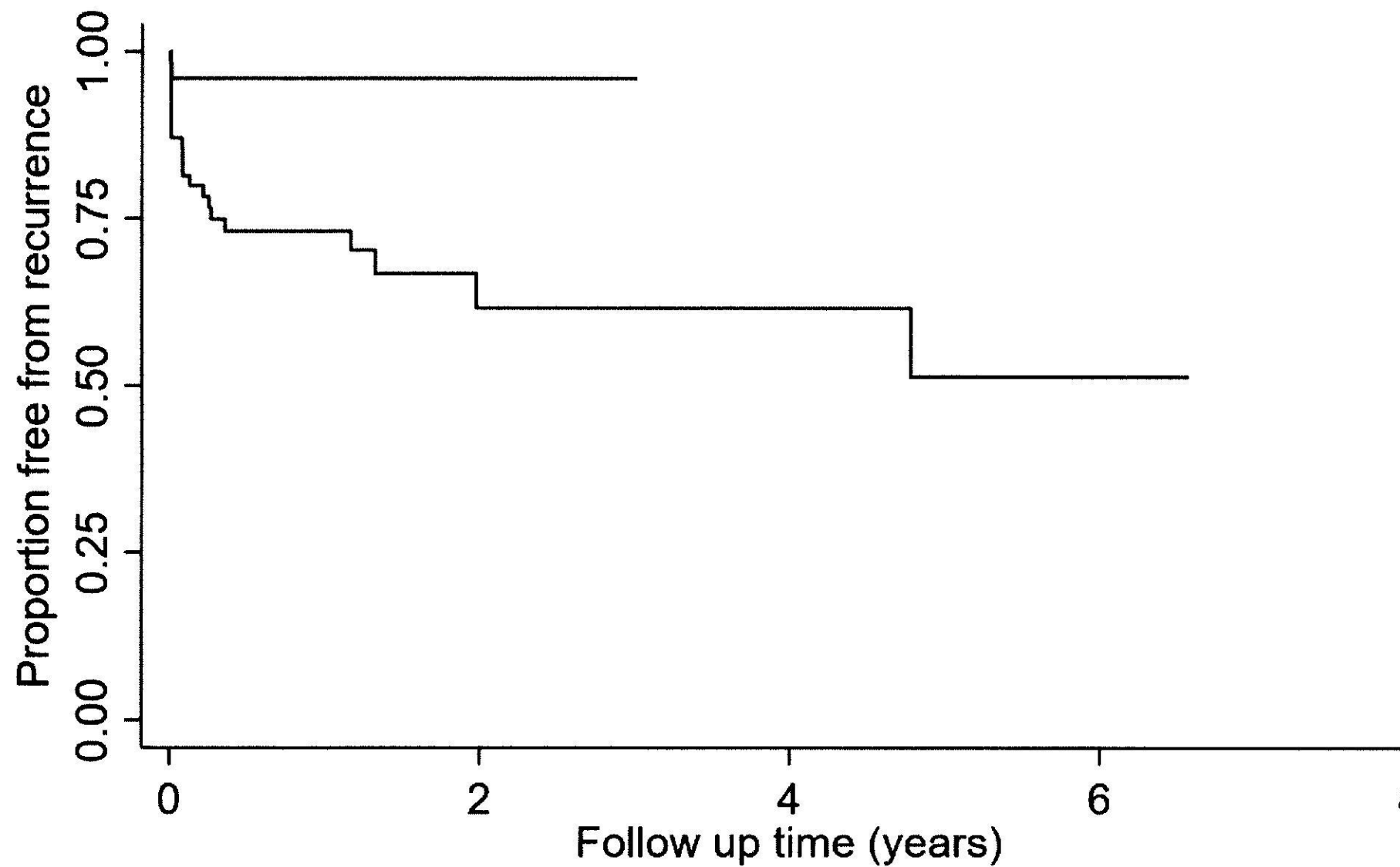


Figure 1: RAO and LAO projections showing retroflexed ablation catheter course targeting a right anterolateral AP from the SVC approach.

Figure 2: Freedom from recurrence Kaplan-Meier survival curve



Number at risk

Retroflex = 0	70	12	7	1	0
Retroflex = 1	25	4	0	0	0

