

First clinical experience of a dedicated irrigated-tip radiofrequency ablation catheter for the ablation of cavotricuspid isthmus-dependent atrial flutter

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BACKGROUND

Different types of irrigated-tip ablation catheters are available for ablation of atrial flutter (AFL). The aim of this study was to compare an established with a novel dedicated Gold irrigated-tip catheter for ablation of AFL.

METHODS AND RESULTS

We compared consecutive patients undergoing ablation of AFL using a standard 3.5 mm irrigated-tip platinum-iridium (Pt-Ir) catheter (Thermocool, TC-group) and a 3.5 mm irrigated gold-tip catheter (Gold-group) specifically designed for cavotricuspid isthmus ablation (CTI). The primary endpoint was acute efficacy (net RF time) to achieve block across the CTI. Secondary endpoints included procedure time, fluoroscopy duration, complications, and recurrence of AFL. 153 patients (age 68 ± 11 years, 74% male) were included. Net RF time to achieve CTI block was not different between the TC-group (793 ± 503 s) and the Gold-group (706 ± 422 s; $p = 0.406$). Total procedure time was not significantly different between the TC-group (70 ± 26 min) and the Gold-group (70 ± 27 min; $p = 0.769$). A significant difference between the groups was identified for the fluoroscopy duration (TC-group: 934 ± 537 s, Gold-group: 596 ± 362 s, $p < 0.001$). There were no major complications observed in the groups. Recurrence of AFL occurred in 3 of 66 (5%) in the TC-group and in 2 of 87 (2%) in the Gold-group ($p = 0.652$).

CONCLUSIONS

In conclusion, acute and chronic efficacy of the irrigated Pt-Ir and gold-tip catheters were comparable. However, the dedicated catheter design was associated with decreased fluoroscopy duration.

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