Left axillary pacemaker generator implantation with direct puncture of the left axillary vein

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Background: Pacemaker generators are routinely implanted in the anterior chest. However, where to place the generator may need to be considered from the mental, functional, and cosmetic standpoints.

Methods: In this study, we performed the left axillary pacemaker generator implantation with a direct puncture of the left axillary vein in 40 consecutive patients, and evaluated the late safety and efficacy of this implantation. Compliances, changes in the lead sensing, pacing threshold, and impedance were used as safety indexes for a mean follow-up of 3.4 years. In addition, the efficacy was also evaluated by comparing their questionnaire survey results to 119 patients in an anterior chest implantation group.

Results: Lead dislodgements were observed in 2 patients of the experiment group. There were no migrations of generators from the implantation site or abnormal variations in the pacing threshold, lead sensing, or impedance. In the control and experiment groups, 85% and 10% of the patients were worried about an external impact; 80% and 25% were worried about electromagnetic interferance; and 68% and 0% answered that the pacemaker implantation site was noticeable, respectively. More patients had a sense of security and cosmetic satisfaction with the left axillary implantation.

Conclusion: The left axillary generator implantations may reduce the mental burden and causes no safety concerns, and may be performed if functional or cosmetic outcomes are required.