



# Clinical significance and levels of blood brain natriuretic peptides in patients with persistent atrial fibrillation before and after catheter ablation

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**ABSTRACT.** The aim of this study was to observe levels of blood brain natriuretic peptides (BNPs) in patients with persistent atrial fibrillation (AF) before and after catheter ablation. Thirty-six patients with persistent AF (28 successful surgeries and eight recurrent cases) and 36 healthy controls with normal sinus rhythm were recruited for this study. BNP levels in the AF and control groups were measured before and after catheter ablation. BNP levels before surgery were significantly higher in the persistent AF group than in the control group ( $P < 0.01$ ). The successful surgery group had distinctly lower BNP levels before ablation than the recurrent group ( $P < 0.01$ ). In the recurrent group, BNP levels 2 h after ablation were significantly lower than those before ablation ( $P < 0.01$ ); these levels increased after AF recurrence ( $P < 0.01$ ) and were comparable with those before ablation ( $P < 0.01$ ). Logistic regression analysis indicated that the BNP level was an inde-

pendent factor for and predictor of AF recurrence ( $P < 0.01$ ). The BNP level in patients with persistent AF is clinically important in predicting and evaluating AF recurrence after ablation.

**Key words:** Brain natriuretic peptides; Atrial fibrillation recurrence; Persistent atrial fibrillation; Radiofrequency ablation for atrial fibrillation