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Nursing care after pulsed field ablation under deep sedation

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The introduction of pulsed field ablation (PFA) has significantly changed pulmonary vein isolation (PVI) workflows in patients with atrial fibrillation. Shorter procedures, a favorable safety profile and increasing use of deep sedation facilitate streamlined postprocedural pathways in which clinically stable patients, after initial recovery, may be managed on a standard cardiology ward with continuous telemetry monitoring rather than routinely requiring intensive care.

Following transfer from the electrophysiology laboratory, nursing care integrates recovery from deep sedation with surveillance for potential ablation-related complications. During early recovery, systematic assessment should include level of consciousness, respiratory rate, oxygen saturation, blood pressure, heart rate and rhythm. Continuous telemetry enables early recognition of bradycardia, tachyarrhythmias and other rhythm disturbances. Attention should be paid to residual respiratory depression, airway obstruction, hemodynamic instability, symptoms suggesting pericardial complications and the femoral vascular access site. Further care includes pain and nausea control, hydration, anticoagulation management, safe mobilization, documentation, structured handover and patient education. Clearly defined escalation criteria are essential for timely medical review or transfer to a higher level of care.

Contemporary data support this increasingly accelerated pathway. In a seven-hospital prospective analysis of 697 patients, including 352 treated with PFA, same-day discharge was achieved in 80.4% after PFA compared with 57.7% after radiofrequency ablation, while 30-day readmission was lower with PFA (4.5% vs 11.0%). Cardiac- or procedure-related readmission was also lower (3.1% vs 8.4%). In a prospective series from a high-volume electrophysiology centre, 108 consecutive PFA procedures were performed using a standardized deep-sedation protocol with spontaneous breathing jointly managed by a trained nurse and electrophysiologist. Although 36% of patients had underlying respiratory disease, no intraprocedural complications were reported and only one patient required propofol under anesthesiologist supervision. Broader PVI literature also supports structured early discharge: a meta-analysis of 3,656 patients reported an overall complication rate of 0.8% and a 30-day readmission rate of 3.6% among selected patients managed with same-day discharge protocols.[1-3] PFA therefore shifts post-ablation care towards structured, risk-adapted monitoring. A telemetry-equipped cardiology ward, appropriately trained nursing staff, standardized assessment and clear escalation criteria may provide a safe environment for early recovery of selected patients after uncomplicated PFA under deep sedation.

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