In-hospital identification of cardiac tamponade after pacemaker implantation: a case report

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Introduction: Cardiac tamponade is a rare but life-threatening complication of permanent pacemaker implantation, most commonly caused by lead perforation[1]. Early recognition of the clinical triad and immediate response are crucial for survival.

Case report: 74-year-old female was admitted following syncope. Medical history included arterial hypertension, moderate aortic stenosis, heart failure with preserved ejection fraction and coronary artery disease with prior percutaneous coronary intervention of the left anterior descending artery. Telemetry revealed a 6-second asystolic pause, and a dual-chamber permanent pacemaker (Biotronik Enitra 6 DR) was implanted. Several hours later on the ward, nursing staff observed sudden hypotension (BP 70/50 mmHg), atrial fibrillation (130/min) and signs of hemodynamic compromise. Bedside echocardiography confirmed a pericardial effusion up to 2.9 cm with right heart collapse, consistent with tamponade. Immediate fluid resuscitation and urgent triage ensured stabilization and rapid transport to the invasive laboratory. Pericardiocentesis via subxiphoid approach drained 220 ml of hemopericardium with prompt hemodynamic recovery (BP 120/80 mmHg, paced rhythm 60/min). The remainder of hospitalization was uneventful, and the patient was discharged in stable condition with recommendations for rehabilitation and regular device follow-up.

Conclusion: Cardiac tamponade after pacemaker implantation is an uncommon but critical complication. In this case, rapid recognition of deterioration by nursing staff on the ward, initiation of volume resuscitation and activation of the transport pathway enabled timely pericardiocentesis. Rapid triage of symptoms and coordinated nurse-led action on the ward remain vital for patient safety.

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LITERATURE

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