

CCPC Clinical Updates

Ambulatory Blood Pressure Monitoring

While office blood pressure readings remain the gold standard for diagnosis and treatment of hypertension, 20-30% of "hypertensive" office patients are normotensive at home. Ambulatory blood pressure & monitoring devices (ABPM), which record multiple blood pressure readings over a 24-hour period, may more accurately reflect a patient's "average" daily blood pressure and allow for more accurate assessment and treatment. In fact, studies demonstrate that ambulatory readings correlate more closely with end-organ complications than levels measured in the physician's office and may have prognostic implications with the persistent hypertension and/or the absence of a nocturnal fall in blood pressure ("dip") indicating increased cardiovascular risk.

On the other hand, patients with normal ambulatory blood pressures (day: <135/85 mm Hg, night: <120/75 mm Hg) with appropriate diurnal variation have low cardiovascular risk without demonstrable end-organ damage. Clinically, ABPM remains most useful for evaluating suspected "white-coat" hypertension.

Bubble Study

Bubble studies are frequently utilized during standard transthoracic echocardiograms to assess for intracardiac shunting (such as a patent foramen ovale or atrial septal defect) in suggestive clinical circumstances, such as dyspnea, unexplained right-sided chamber enlargement or embolic stroke. In selected cases, these may also be used to enhance limited Doppler signals (e.g., tricuspid regurgitation), allowing for more accurate assessment of intracardiac pressures (e.g., pulmonary artery systolic pressures). The study requires intravenous access and two separate injections of "agitated" saline (mixed with a small amount of air) at rest and with the Valsalva maneuver for comprehensive assessment.