Are adults with nocturia more likely to have obstructive sleep apnea than adults without nocturia?

Evidence-Based Answer
There appears to be an association between frequency of nocturia and the severity of sleep apnea in both older men and women. (SOR: B, based on 2 cohort studies.) It is unclear under what conditions a complaint of nocturia should prompt an evaluation for sleep apnea.

In a prospective cohort study, 58 independent older adults (median age 77.7 years, 76% female) with severe sleep-disordered breathing were asked to keep a voiding diary for 72 hours and then undergo a sleep study. The subjects were grouped according to their apnea-hypopnea index (AHI), defined by the number of apneas and hypopneas that occurred during each hour of sleep. Overall, 45% of subjects had an AHI <10, 36% had an AHI 10 to 24, and 19% had an AHI >25. The mean number of nocturia episodes was significantly greater in the group with an AHI >25 (2.6 episodes) than the other 2 groups (1.6–1.7 episodes; \( P = .028 \)).

In a prospective longitudinal cohort study, 100 perimenopausal women were identified with nocturia and compared with 200 women without nocturia. The women were asked to complete a questionnaire that included obstructive sleep apnea symptoms, measured using the multivariable apnea risk assessment (MAP) index. Scores on the MAP range from 0 to 1 and a mean score of 0.50 has an 80% positive predictive value for diagnosing obstructive sleep apnea. In the women with nocturia, the mean MAP index score was 0.9, compared with 0.34 in the women without nocturia (OR 2.18; 95% CI, 1.58–3.02).

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How often do you need to change a PICC line?

Evidence-Based Answer
There is no need to routinely change a peripherally inserted central catheter (PICC) line to prevent infections. As long as the PICC line is functioning and there is no evidence of line-associated local or systemic infection, the PICC line can remain in place until it is no longer needed. (SOR: B, based on a single RCT and an evidence-based guideline with moderate level of evidence.)

In the United States, more than 5 million central venous catheters (CVCs), including PICC lines, are used every year. Line protocols are in place to minimize serious complications, catheter-related bloodstream infection among them.

A 2004 RCT compared the routine removal of central lines (standard-of-care group) with watchful waiting in 64 stable intensive care unit (ICU) patients (80 CVCs total) with fever and suspected catheter-related infection who did not meet criteria for severe sepsis or have erythema at the insertion site. Patients in the watchful waiting group did have the catheter removed if they became hemodynamically unstable or bacteremia developed, or after 5 days of observation if the treating physician desired line removal.

In the standard-of-care group 38 of 38 CVCs were removed, compared with 16 of 42 in the watchful waiting group (\( P < .01 \)). No difference was noted in confirmed catheter-related bloodstream infections (5% in the standard-of-care group vs 7% in the watchful waiting group; \( P > .2 \)). In addition, no difference was noted in duration of hospital stay (42 vs 34 days, respectively; \( P > .2 \)) or ICU mortality (31% vs 25%, respectively; \( P > .2 \)).

An evidence-based guideline by the Hospital Infection Control Practices Advisory Committee of the Centers for Disease Control and Prevention, in conjunction with multiple professional organizations, updated a guideline on the prevention of intravascular catheter-related infections in 2002. The guideline states that replacement of CVCs—including PICC lines—is not needed to prevent catheter-related infections when catheters are functioning and have no evidence of causing local or systemic problems (level of evidence IB, moderate evidence from at least 1 or more properly randomized control trial).