

PREVENTION OF VENTILATOR-ASSOCIATED PNEUMONIA

The investigators performed an evidence-based literature review of interventions used for preventing ventilator-associated pneumonia in critically ill patients, assessed these methods for efficacy and adverse effects, and recommended an approach for their use. A systematic literature search using MEDLINE and the Cochrane Library yielded 433 articles; additional articles were located by manually searching the bibliographies of retrieved articles. Studies were included ($n = 34$) if they were randomized controlled or observation-cohort controlled trials and if they had a clinically important outcome or a surrogate outcome directly linked to a clinical outcome. Preventive strategies were graded (I–IV) on the basis of the strength of the studies supporting their use. The investigators recommended that physicians consider the following interventions for reducing the incidence of ventilator-associated pneumonia in critically ill populations: (1) semi-recumbent positioning of all eligible patients (grade IIa); (2) using sucralfate instead of H_2 -antagonists for stress ulcer prophylaxis in patients at low-to-moderate risk for gastrointestinal bleeding (grade I); (3) aspiration (ie, suctioning) of subglottic secretions in patients likely to need mechanical ventilation for more than 3 days (grade IIa); and (4) oscillating beds in surgical or neurologic patients (grade I). Further research is required to determine if the preventive benefits of these practices is additive.

Collard HR, Saint S, Matthay MA. Prevention of ventilator-associated pneumonia: an evidence-based systematic review. *Ann Intern Med* 2003;138:494–501.

PREVENTION OF MISCARRIAGE AND PRETERM DELIVERY IN ASYMPTOMATIC WOMEN WITH BACTERIAL VAGINOSIS OR ABNORMAL VAGINAL FLORA

Researchers examined whether treatment with oral clindamycin for asymptomatic bacterial vaginosis and intermediate abnormal vaginal flora in the second trimester reduces the risk of late miscarriage and preterm delivery in a general population of pregnant women. Between November 1996 and February 1999, screening in 2 hospitals in the United Kingdom identified 740 antenatal women with bacterial vaginosis or abnormal vaginal flora. Of these women, 246 were excluded, and the remaining 494 were randomized to either clindamycin (300 mg twice daily for 5 days) or placebo. Nine of these women were lost to follow-up or electively terminated the pregnancy. Women in the clindamycin group had significantly fewer miscarriages or spontaneous preterm deliveries than did women in the placebo group (13/244 [5.3%] versus 38/241 [15.7%]; percentage difference, 10.4% [95% confidence interval, 5.0–15.8]; $P = .0003$).

Mean gestational age overall (deliveries and miscarriage included), mean birthweight for delivered babies, and proportions of infants admitted to the neonatal intensive care unit were not significantly different between the groups. Women with a prior spontaneous preterm delivery or mid-trimester miscarriage had substantially worse outcomes overall. Clindamycin reduced negative outcomes across the range of abnormal Nugent scores, with the effect being greatest in women with the highest Nugent score (10).

Ugwumadu A, Manyonda I, Reid F, Hay P. Effect of early oral clindamycin on late miscarriage and preterm delivery in asymptomatic women with abnormal vaginal flora and bacterial vaginosis: a randomised controlled trial. *Lancet* 2003;361:983–8.

INFLUENZA VACCINATION AND REDUCED HOSPITALIZATIONS FOR CARDIAC DISEASE AND STROKE

To determine whether influenza vaccination in elderly people lowers hospitalization rates for cardiac and cerebrovascular disease, 2 large cohorts (respectively, 140,055 and 146,328 patients) of community-dwelling members of 3 managed care organizations who were at least 65 years old were studied during the 1998–1999 and 1999–2000 influenza seasons. Vaccination rates were 55.5% and 59.7% in the 1998–1999 and 1999–2000 cohorts, respectively. After adjusting for demographic characteristics, baseline data indicated that vaccinated patients were older and had greater burden of illness, whereas unvaccinated patients were more likely to have received a diagnosis of stroke or dementia. Influenza vaccination reduced the odds of all study outcomes, including hospitalization for cerebrovascular disease (16% reduction in 1998–1999, $P = .018$; 23% in 1999–2000, $P < .001$), cardiac disease (19% reduction in both seasons, $P < .001$), pneumonia or influenza (32% in 1998–1999, $P < .001$; 29% in 1999–2000, $P < .001$), and death from all causes (48% in 1998–1999, $P < .001$; 50% in 1999–2000, $P < .001$). Influenza vaccination was not associated with significant reduction in the odds of hospitalization during summer months. The researchers conclude that vaccination reduces the risk of hospitalization for cardiac and cerebrovascular disease similarly in healthy and high-risk elderly persons and, therefore, both groups should receive influenza vaccinations.

Nichol KL, Nordin J, Mullooly J, et al. Influenza vaccination and reduction in hospitalizations for cardiac disease and stroke among the elderly. *N Engl J Med* 2003;348:1322–32.

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