

# POEMs

## Patient-Oriented Evidence that Matters

*The POEMs selected for this month are another varied collection. They caution us once again to question the use of anti-depressant medication in children, and provide some evidence that ear thermometry may be unreliable in children (resurrect those old mercury thermometers if detection of a fever might make a difference) and that calcium/vitamin D supplementation helps to prevent falls in older women. Editor.*

### Clinical question

Are antidepressant medications associated with an increased risk of suicidal behavior in children?

### Bottom line

The use of antidepressant medications in children is associated with an increased risk of suicidal ideation and suicide-related behaviors. It is uncertain what overall effect antidepressant medications have on the morbidity and mortality of treated children. Close monitoring of patients using these medications regarding the risk of suicidality is recommended. (LOE = 1a-)

### Reference

Hammad TA, Laughren T, Racoosin J. Suicidality in pediatric patients treated with antidepressant drugs. *Arch Gen Psychiatry* 2006; 63:332-39.

### Study Design

Meta-analysis (randomised controlled trials)

### Funding

Government

### Setting

Various (meta-analysis)

### Synopsis

Concern exists about the potential for antidepressant medications to raise the risk of suicide in children and adolescents. The investigators pooled data from all 24 placebo-controlled trials comprising 4582 patients sub-

mitted to the Food and Drug Administration by various drug manufacturers. It is likely that this search method found most, if not all, clinical trials reporting safety information. Studied drugs included fluoxetine (Prozac), sertraline (Zoloft), paroxetine (Paxil), fluvoxamine (Luvox), citalopram (Celexa), bupropion (Wellbutrin), venlafaxine (Effexor), nefazodone, and mirtazapine (Remeron). Sixteen trials studied patients with major depressive disorder, and the remaining eight studied obsessive-compulsive disorder, generalised anxiety disorder, attention-deficit/hyperactivity disorder, and social anxiety disorder. Events included either increased suicidal ideation or suicidal behavior. None of the trials reported a completed suicide. Trial durations ranged from four weeks to 16 weeks, so long-term risk is not included in this analysis. Individuals blinded to treatment group assignment evaluated adverse events potentially representing suicidal-related events. The selection process resulted in 130 unique patients with a suicidal-related event. The overall relative risk increase for suicidality for selective serotonin reuptake inhibitors in depression trials was 1.66 (95% CI, 1.02-2.68; number needed to treat to harm [NNTH] = 54, 21-1786) and for all drugs across all indications was 1.95 (95% CI, 1.28-2.98; NNTH = 38, 18-128). Venlafaxine (Effexor) was the only individual drug with a statistically significant increased risk of suicidality. There were no suicidal-related events reported for nefazodone and bupropion.

### Clinical question

How reliable is ear thermometry in detecting fever in children?

#### Bottom line

Ear thermometry will only detect approximately two-thirds of febrile children. Although it is fast and easy, the use of ear thermometry should be limited to those situations in which it doesn't matter if fever is present. (LOE = 1a-)

#### Reference

Dodd SR, Lancaster GA, Craig JV, Smyth RL, Williamson PR. In a systematic review, infrared ear thermometry for fever diagnosis in children finds poor sensitivity. *J Clin Epidemiol* 2006; 59:354-357.

#### Study Design

Systematic review

#### Funding

Unknown/not stated

#### Setting

Outpatient (any)

#### Synopsis

In 2002, these authors published a systematic review (*Lancet* 2002; 360:603-609) that demonstrated wide variability in the agreement between ear thermometry and rectal thermometry in children. In this study, they used the same review to determine the reliability of ear thermometry in detecting fever in children. To do this, they systematically searched numerous databases and tried to find unpublished studies. Two authors independently assessed the quality of the 23 included studies (of nearly 4100 children) and two authors independently extracted the data. The sensitivity of ear thermometry ranged from 0 to 100%. The specificity ranged from 58% to 100%. The most conservative pooled estimates, however, were 64% and 95%, respectively. In other words, ear thermometry is not very reliable in detecting fever.

### Clinical question

Does calcium plus vitamin D therapy decrease falls in older women?

#### Bottom line

Treating older women with vitamin D and calcium decreases their likelihood of experiencing a fall, although the change in fall rate does not occur quickly. The effect is more pronounced in inactive women. (LOE = 1b)

#### Reference

Bischoff-Ferrari HA, Orav EJ, Dawson-Hughes B. Effect of cholecalciferol plus calcium on falling in ambulatory older men and women. *Arch Intern Med* 2006; 155:424-30.

#### Study Design

Randomised controlled trial (double-blinded)

#### Funding

Foundation

#### Allocation

Uncertain

#### Setting

Population-based

#### Synopsis

Vitamin D may have an effect on proximal or lower extremity muscle strength, and a previous meta-analysis

found a 20% decrease in falls in women with vitamin D use. This report is an analysis of a previously performed evaluation of the effect of calcium/vitamin D on bone mineral density (*New Engl J Med* 1997; 337:670-76). The researchers identified within one community, 445 healthy, ambulatory individuals at least 65 years old (average age = 71 years). Forty-five per cent of the subjects were men, most were white, and none were being treated for osteoporosis with anything other than calcium and vitamin D. The patients were randomly assigned (allocation concealment uncertain) to receive either placebo or calcium plus vitamin D (calcium citrate malate 500mg/day and vitamin D3 700IU/day). Only 71% were still taking their treatment at the end of the three-year study. Overall, 49% of the men and 55% of the women fell during the study period. Half (53%) of these falls occurred in the first year of the study and the results were not different between the two groups. However, among women, falls were significantly lower in the intervention group (47% vs 60%). The number needed to treat for three years in this study was seven (95% CI, 3.5-136). These results were primarily seen in women who were less active. There was no difference in the men's fall rate between groups. The effect was not dependent on initial vitamin D (25-hydroxyvitamin D) serum levels.