

Abstracts

Inhaled adrenaline no better than inhaled saline for babies with bronchiolitis

A new trial challenges a widespread treatment for infants with bronchiolitis. Inhalations of racemic adrenaline worked no better than inhalations of saline in infants admitted to Norwegian hospitals. Infants given adrenaline were discharged no faster (63.6 v. 68.1 h; difference 4.5 h, 95% CI 6.5 - 15.5) and were no less likely to need supplementary oxygen, nasogastric feeding or ventilator support than controls. Both groups had comparable improvements in clinical scores after their first inhalation. Subgroup analyses hinted at longer admissions for babies under 8 weeks old given racemic adrenaline.

The trial had a factorial design and infants received their inhalations on demand or according to a fixed schedule. Those treated on demand had fewer inhalations overall and went home nearly 14 hours earlier than those treated to a fixed schedule (13.7 h, 95% CI 2.9 - 24.4). They were significantly less likely to need supplementary oxygen or ventilatory support (4% (8/200) v. 10.8% (22/204); rate ratio 0.37, 0.17 - 0.81).

The trial was smaller than planned, but the authors are confident that they had enough power to rule out a clinically meaningful difference between inhaled adrenaline and saline, except possibly in the youngest babies. Treatment on demand looked superior to fixed schedules in this first head-to-head comparison. Respiratory syncytial virus was the most common cause of bronchiolitis in the 123 children who were tested (80.5%, 99/123).

Skjervén HO, et al. *N Engl J Med* 2013;368:2286-2293. [<http://dx.doi.org/10.1056/NEJMoa1301839>] *BMJ* 2013;346:f3848.

Planned home birth in low-risk women in the Netherlands

In the Netherlands, at least, a planned home birth has no more risk of adverse outcomes than a planned hospital birth. Ank de Jonge and colleagues used a cohort study to test the hypothesis that low-risk women with a planned home birth have a higher rate of severe, acute maternal morbidity than women with a planned hospital birth. They drew their data from 146 752 women in primary care at the onset of labour.

Their main outcome measures were severe, acute maternal morbidity (admission to an intensive care unit, eclampsia, blood transfusion of four or more units of packed cells, and other serious events), postpartum haemorrhage, and manual removal of the placenta.

Overall, 92 333 (62.9%) women had a planned home birth and 54 419 (37.1%) a planned hospital birth. The rate of severe, acute maternal morbidity among planned primary care births was 2.0 per 1 000 births. For nulliparous women the rate for a planned home versus a planned hospital birth was 2.3 versus 3.1 per 1 000 births, the rate of postpartum haemorrhage was 43.1 versus 43.3 and the rate of manual removal of the placenta was 29.0 versus 29.8.



For parous women the rate of severe, acute maternal morbidity for a planned home versus a planned hospital birth was 1.0 versus 2.3 per 1 000 births, the rate of postpartum haemorrhage was 19.6 versus 37.6, and the rate of manual removal of the placenta was 8.5 versus 19.6.

Low-risk women in primary care at the onset of labour with a planned home birth had lower rates of severe, acute maternal morbidity, postpartum haemorrhage, and manual removal of the placenta than those with a planned hospital birth. For parous women these differences were statistically significant. Absolute risks were small in both groups. There was no evidence that a planned home birth among low-risk women leads to an increased risk of severe, adverse maternal outcomes in a maternity care

system with well-trained midwives and a good referral and transportation system.

De Jonge A, et al. *BMJ* 2013;346:f3263. [<http://dx.doi.org/10.1136/bmj.f3263>] (Published 13 June 2013.)

Co-prescription of statins and antibiotics linked to extra deaths

Evidence is growing of an important drug interaction between widely used statins and antibiotics. Clarithromycin and erythromycin inhibit the cytochrome P450 isoenzyme that metabolises atorvastatin, simvastatin, and lovastatin. Co-prescription of any combination of these statins and antibiotics increases blood concentrations of the statin, and extra side-effects may follow, say researchers.

In one large cohort from Canada, older adults taking an implicated statin alongside erythromycin or clarithromycin were significantly more likely to be admitted to hospital with rhabdomyolysis or acute kidney injury, and significantly more likely to die within 30 days than similar adults taking azithromycin instead. Azithromycin does not inhibit the cytochrome P450 isoenzyme.

The authors linked four of Ontario's administrative databases to construct a cohort of 144 336 regular users of statins who also received a prescription for clarithromycin, erythromycin, or azithromycin between 2003 and 2010. Compared with azithromycin, a prescription for either of the other antibiotics was associated with one extra death in every 399 older adults treated, one extra acute kidney injury in every 499 treated, and one extra hospitalisation for rhabdomyolysis in every 5 870 treated. These are small absolute increases, say the authors, but co-treatment is common. Atorvastatin is the most widely prescribed drug in Canada.

Analyses were extensively adjusted, and the results are in line with anecdotal reports of serious and sometimes lethal statin toxicity in older adults given erythromycin or clarithromycin. Prescribers should avoid the implicated combinations whenever possible, say the authors. All adults in this study were aged 65 or over.

Patel AM, et al. *Ann Intern Med* 2013;158(12):869-876. [<http://dx.doi.org/10.7326/0003-4819-158-12-201306180-00004>] *BMJ* 2013;346:f3963.