

Journal Scan

Risk of a thrombotic event after the 6-week postpartum period

It is well known that the postpartum state is associated with a substantially increased risk of thrombosis. However the duration of this increased risk is not known. Authors perused data on postpartum thrombosis from hospitals in California between 2005-10. Among the 1,687,930 women with a first recorded delivery, 1015 had a thrombotic event (248 cases of stroke, 47 cases of myocardial infarction, and 720 cases of venous thromboembolism) in the period of 1 year plus up to 24 weeks after delivery. The risk of primary thrombotic events was markedly higher within 6 weeks after delivery than in the same period 1 year later, with 411 events versus 38 events, for an absolute risk difference of 22.1 events (95% confidence interval [CI], 19.6 to 24.6) per 100,000 deliveries and an odds ratio of 10.8 (95% CI, 7.8 to 15.1). There was also a modest but significant increase in risk during the period of 7 to 12 weeks after delivery as compared with the same period 1 year later, with 95 versus 44 events, for an absolute risk difference of 3.0 events (95% CI, 1.6 to 4.5) per 100,000 deliveries and an odds ratio of 2.2 (95% CI, 1.5 to 3.1). Risks of thrombotic events were not significantly increased beyond the first 12 weeks after delivery.

Comment

This study adds information on the period up to which the increased risk of thrombosis, associated with the postpartum state, persists after conclusion of the pregnancy. The authors concluded that while an increased risk is seen upto 12 weeks, higher absolute risk was confined to the initial 6 weeks only. The strength of the study is derived from the very large number of pregnancies studied.

Kamel H, Navi BB, Sriram N, Hovsepian DA, Devereux RB, Elkind MSV. Risk of a thrombotic event after the 6-week postpartum period. N Engl J Med 2014; 370:1307-1315 April 3, 2014.

Anastrozole for prevention of breast cancer in high-risk postmenopausal women (IBIS-II): an international, double-blind, randomised placebo-controlled trial

Between Feb 2, 2003, and Jan 31, 2012, 1920 postmenopausal women aged 40-70 years at increased risk of breast cancer were randomly assigned to receive anastrozole 1mg orally and 1944 to placebo. After a median follow-up of 5.0 years (IQR 3.0-7.1), 40 women in the anastrozole group (2%) and 85 in the placebo group (4%) had developed breast cancer (hazard ratio 0.47, 95% CI 0.32-0.68, $p < 0.0001$). The predicted cumulative incidence of all breast cancers after 7 years was 5.6% in the placebo group and 2.8% in the anastrozole group. 18 deaths were reported in the anastrozole group and 17 in the placebo group, and no specific causes were more common in one group than the other ($p = 0.836$).

Comment

Breast cancer is by far the most common form of cancer in women, with 1.4 million new cases reported annually. Oestrogen is a key factor in breast cancer carcinogenesis even in postmenopausal women, and reductions in its synthesis can decrease breast cancer risk. Oestrogen production is driven by the aromatase



http://svimstpt.ap.nic.in/jcsr/jul-sep14_files/js314.pdf

enzyme, which converts androgens to oestrogens. The present study shows that Anastrozole, an aromatase inhibitor effectively reduces incidence of breast cancer in high-risk postmenopausal women. This new information may be in future be incorporated in cancer prevention guidelines for breast cancer prevention in high risk postmenopausal women so that such patients can benefit from this strategy.

Cuzick J, Sestak I, Forbes JF, Dowsett M, Knox J, Cawthorn S, Saunders C, Roche N, Mansel RE, Minckwitz GV, Bonanni B, Palva T, Howell A, on behalf of the IBIS-II investigators. Anastrozole for prevention of breast cancer in high-risk postmenopausal women (IBIS-II): an international, double-blind, randomised placebo-controlled trial. The Lancet, Volume 383, Issue 9922, Pages 1041 - 1048, 22 March 2014.

Maternal antenatal vitamin D status and offspring muscle development: findings from the southampton women's survey

Authors investigated the associations between maternal plasma 25(OH)D status at 34 weeks of gestation and offspring lean mass and muscle strength at 4 years of age. 678 mother-child pairs were included in this analysis. The maternal serum 25(OH)D concentration in pregnancy was positively associated with offspring height-adjusted hand grip strength ($\beta = 0.10$ SD/SD, $P = .013$), which persisted after adjustment for maternal confounding factors, duration of breastfeeding, and child's physical activity at 4 years ($\beta = 0.13$ SD/SD, $P = .014$). Maternal 25(OH)D was also positively associated with offspring percent lean mass ($\beta = 0.11$ SD/SD, $P = .006$), but not total lean mass ($\beta = 0.06$ SD/SD, $P = .15$) as assessed by whole body DEXA scan. However, this association did not persist after adjustment for confounding factors ($\beta = 0.09$ SD/SD, $P = .11$). Authors concluded that intrauterine exposure to 25(OH)D during late pregnancy might influence offspring muscle development through an effect primarily on muscle strength rather than mass.

Comment

This study once again brings out the role of maternal nutrition in ensuring a healthy baby by focusing on one important nutrient namely vitamin D. Given the very high prevalence of vitamin D deficiency in the general population, this study underscores the importance of vitamin D supplementation in pregnancy to ensure optimal muscle development of the offspring.

Harvey NC, Moon RJ, Sayer AA, Ntani G, Davies JH, Javaid MK, Robinson SM, Godfrey KM, Inskip HM, Cooper C, and The Southampton Women's Survey Study Group. Maternal antenatal vitamin D status and offspring muscle development: findings from the southampton women's survey. The Journal of Clinical Endocrinology & Metabolism 2014 99:1, 330-337

Reviewers

V. Suresh, A. R. Bitla

Provenance and peer review Commissioned; internally peer reviewed.