was seen at sites with more cortical bone. PTH followed by alendronate was more effective than combination therapy followed by alendronate, or PTH followed by placebo.

This study has several limitations that need to be addressed in further trials; however, alendronate appears to be an effective therapy following 1 year of full-length PTH.

Pippa Murdie

Original article Black DM *et al.* (2005) One year of alendronate after one year of parathyroid hormone (1–84) for osteoporosis. *N Engl J Med* **353:** 555–565

A new treatment algorithm for radioiodine treatment of children with thyroid cancer

Current literature recommends that levothyroxine be withdrawn for 6 weeks prior to radioiodine treatment for thyroid cancer, to increase serum TSH levels and consequently increase the iodine-concentrating ability of malignant thyroid tissue. Recent studies have shown that a shortened withdrawal time is beneficial, because it lessens hypothyroid morbidity. Kuijt and Huang investigated whether adequate hyperthyrotropinemia (serum TSH >25 μU/ml) could be achieved using a simplified 2-week withdrawal program in children with differentiated thyroid cancer.

This retrospective study took place between May 2000 and February 2005 at the Children's Hospital Boston, MA, and included data on 15 withdrawals from 11 children (mean age at withdrawal 12.5 years). Most patients underwent radioiodine whole-body scanning before and after radioiodine therapy. Serum TSH was measured anytime between 19 days before levothyroxine withdrawal to 2 days afterwards, and then regularly from approximately 7 days after withdrawal.

Levothyroxine withdrawal was followed by a rapid rise in serum TSH levels. The mean length of time needed to achieve hyperthyrotropinemia was 12.3 ± 0.7 days. All children tested achieved adequate hyperthyrotropinemia by day 14. The children showed a more rapid rise in serum TSH levels following levothyroxine withdrawal than was expected, compared with previous studies in adults.

The authors suggest that a treatment algorithm should be constructed and recommend that, in children with thyroid cancer, the 6-week levothyroxine withdrawal protocol should be replaced with one of 2 weeks.

Rebecca Ireland

Original article Kuijt WJ and Huang SA (2005) Children with differentiated thyroid cancer achieve adequate hyperthyrotropinemia within 14 days of levothyroxine withdrawal. *J Clin Endocrinol Metab* [doi:10.1210/jc.2005-1085]

Misoprostol is an acceptable alternative to surgical management for early pregnancy failure

The current treatment of choice for early pregnancy failure is vacuum aspiration. Medical management with misoprostol is a novel therapy, but no large trials have yet investigated the efficacy and safety of this drug. Zhang *et al*. compared misoprostol with surgical management for treatment of women with early pregnancy failure.

In this randomized trial, women were eligible if they had an anembryonic gestation, embryonic or fetal death, or incomplete or inevitable spontaneous abortion. In total, 652 women were enrolled, of whom 491 were randomly assigned to receive 800 μg misoprostol administered vaginally, and 161 women to have vacuum aspiration on study day 1. If the uterus did not completely expel all intended contents by day 3, a repeat 800 μg dose was given.

In the misoprostol group, successful expulsion of intended contents, after a second misoprostol dose when necessary, occurred in 84% of women who completed the trial. If the uterus still did not completely expel all intended contents by day 8, vacuum aspiration was offered. This compared with a success rate of 97% in the vacuum aspiration group. Misoprostol treatment failed in 16% of women, whereas 3% of women in the surgical group required a second operation.

The authors conclude that misoprostol is safe and effective for the treatment of early pregnancy failure and an acceptable alternative to surgical management. The risk of hemorrhage and pelvic infection was low (1% or less), similar to that of surgical management. Side effects were generally mild and tolerable.

Marie Lofthouse

Original article Zhang J *et al.* (2005) A comparison of medical management with misprostol and surgical management for early pregnancy failure. *N Engl J Med* **353:** 761–769