

dose-dependent increases on treatment with ED-71. In addition, bone formation and resorption markers decreased by around 20% after 12 months of treatment. Although transient hypercalcemia arose in 7% (0.50 µg), 5% (0.75 µg) and 23% (1.00 µg) of patients treated with ED-71, none developed sustained hypercalcemia. A comparison with data obtained with alfacalcidol suggested that ED-71 resulted in a greater increase in BMD, while its effects on serum and urinary calcium were similar.

The authors suggest that 0.75 µg/day ED-71 appears to be a “safe, well-tolerated and effective dose in increasing both lumbar and femoral BMD” and is a promising candidate for the treatment of osteoporosis. The longer-term efficacy of ED-71 compared with alfacalcidol in the prevention of fracture in osteoporotic patients is currently under investigation.

Carol Lovegrove

**Original article** Matsumoto T *et al.* (2005) A new active vitamin D, ED-71, increases bone mass in osteoporotic patients under vitamin D supplementation: a randomized, double-blind, placebo-controlled clinical trial. *J Clin Endocrinol Metab* **90**: 5031–5036

## Arterial structure and endothelial function in Turner syndrome

Women with Turner syndrome (TS) are at increased risk of cardiovascular complications, especially dissection or rupture of the aorta, implying an underlying arterial-wall defect. To investigate possible underlying mechanisms for the vasculopathy seen in this syndrome, Ostberg and colleagues assessed a range of vascular parameters in women with TS, normal controls, and women with primary amenorrhea but normal karyotype.

Widespread vascular structural differences were seen in women with TS compared with normal controls. Arterial dilatation was present in multiple vessels in addition to the aorta and was associated with increased carotid intima-media thickness (IMT). Women with primary amenorrhea showed similar increases in IMT, but without arterial dilatation, implying that estrogen deficiency is linked to IMT in TS, but is not the primary cause of vascular abnormalities. On multivariate analysis, common carotid diameter was independently associated

with TS status, height, weight and IMT, and IMT was independently associated with TS status, age, diastolic blood pressure and common carotid diameter. Endothelial function was found to be similar between all three groups, suggesting that endothelial dysfunction is not the underlying cause of the large-vessel abnormalities seen in women with TS and those with estrogen deficiency.

These findings suggest that the vasculopathy seen in TS is associated with both genetic factors and estrogen deficiency. The authors suggest that management of blood pressure and estrogen deficiency may be appropriate therapeutic targets for cardiovascular risk reduction in women with TS.

Carol Lovegrove

**Original article** Ostberg JE *et al.* (2005) Vasculopathy in Turner syndrome: arterial dilatation and intimal thickening without endothelial dysfunction. *J Clin Endocrinol Metab* **90**: 5161–5166

## Testosterone patch increases sexual activity in women with hypoactive sexual desire disorder

Women who have undergone oophorectomy often report a decrease in sexual desire after surgery, which might be related to low levels of circulating androgens. Simon *et al.*, therefore, investigated the efficacy of testosterone therapy in women with hypoactive sexual desire disorder (HSDD) after surgically induced menopause.

This randomized, double-blinded, placebo-controlled, phase III study enrolled 562 women with HSDD aged between 20 and 70 years who had undergone bilateral salpingo-oophorectomy at 52 centers in the US, Canada and Australia. Of these women, 279 were randomized to placebo and 283 to receive 300 µg/day testosterone, applied as a twice-weekly patch. In all, 230 women in the placebo group and 221 women in the testosterone group completed the 24-week study.

At the end of the study, the frequency of satisfying sexual activity significantly increased in the testosterone group compared with placebo ( $P=0.0003$ ). The total number of sexual episodes and orgasms also significantly increased in women who received the testosterone patch in comparison with placebo. Furthermore, personal distress,