

Letter to the Editor

## Bilateral Breast Fibroadenomas in a Renal Transplant Recipient

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### Dear Editor,

In April 2009, a 56-year-old woman presented with gradual painless bilateral breast enlargement over the preceding 2 weeks. There was no nipple discharge and she otherwise felt well. One month earlier she received a renal allograft from a deceased donor, for treatment of end-stage renal disease caused by chronic pyelonephritis. The posttransplantation course was uneventful and she was discharged from hospital 14 days after the surgery. Her immunosuppressive protocol included cyclosporine A, mycophenolate mofetil and steroids. She also received pantoprazole.

She was admitted to hospital for additional evaluation. On physical examination she had markedly symmetrically enlarged breasts, with tense, warm skin. Nipples were engorged and erythematous and could not be differentiated from the surrounding skin (Figure 1). There was no axillary lymphadenopathy, and clinical status was otherwise unremarkable without associated gingival hypertrophy. Urgent mammography revealed dense and glandular breast tissue, and breast ultrasound failed to find any focal lesion. Biopsy was not performed.



**Fig. 1.** Bilateral breast enlargement in a patient treated with cyclosporine

Laboratory investigations revealed increase in serum creatinine (from 197 to 235  $\mu\text{mol/L}$ ), and increased trough concentration of cyclosporine (299  $\text{ng/mL}$ ). Estra-

diol was 84  $\text{pmol/L}$  (normal value  $<37$ ), LH 46  $\text{IU/L}$  ( $>15$ ), FSH 29  $\text{IU/L}$  ( $>20$ ), and prolactin was 28  $\mu\text{g/L}$  [4-23].

Patient was switched to tacrolimus. Significant improvement in clinical status occurred 5 days later with decrease in the size and erythema of the breasts (Figure 2). Control serum creatinine was 144  $\mu\text{mol/L}$ .



**Fig. 2.** Five days after conversion from cyclosporine to tacrolimus significant decrease in the size and erythema of the breasts occurred

Breast fibroadenomas occur as a rare side-effect of cyclosporine therapy [1-5]. It was previously believed that they develop only in female patients of childbearing age [6]. Our patient develops bilateral fibroadenomas at the age of 56, eight years after menopause and only one month after renal transplantation. She had elevated estradiol and slightly elevated FSH and prolactin levels. The mechanism by which cyclosporine induces development of fibroadenomas remains unclear. Possible etiologies include direct effect on breast fibroblasts [7], effect on the hypothalamopituitary axis [8] or antagonism of the prolactin receptor sites [9].

Cyclosporine toxicity should be included in differential diagnosis of breast enlargement in renal transplant recipients, and these patients should be switched to tacrolimus as soon as possible. Further studies are needed to gain more insight into the pathogenesis of cyclosporine-associated breast hypertrophy.

*Conflict of interest statement.* None declared.

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