THE USE OF EVENING PRIMROSE OIL (EFAMOL) IN THE MANAGEMENT OF BREAST PAIN

D.F. HORROBIN

Women with breast pain, whether premenstrual or non-cyclic, almost always respond to natural or artificial loss of ovarian function indicating that ovarian hormones have a major role in producing breast pain. However, ovarian hormone levels are normal in such women: abnormal hormone sensitivity to normal hormone levels must therefore be involved. Breast pain is common in societies where fat intake, especially of saturated fat, is high. Progesterone and oestrogen receptors exist in a lipid environment: in vitro studies have shown that when that environment is rich in saturated fats, the binding of the steroid to the receptor is greater than when it is rich in unsaturated fats. Moreover oestrogens form esters with fatty acids in target hormones and the oestrogen esters thus formed are responsible for much of the activity of the hormone. Oestrogen esters with saturated fats are more potent oestrogens than those found with unsaturated fats.

In women with breast pain, plasma and red cell membrane phospholipids were found to have higher levels of saturated fats and lower levels of polyunsaturated essential fatty acids than normal women. If this pattern occurred in the breast it could be responsible for sensitizing the breast to normal oestrogen levels Double blind, placebo-controlled trials were therefore set up to test the hypothesis that a selected variety of evening primrose oil (Efamol) might have a beneficial effect in breast pain. Efamol is high in triglycerides containing the EFAs linoleic acid and gamma-linolenic acid (GLA). The GLA is important because it is beyond the rate limiting 6-desaturase step and unlike linoleic acid, can raise plasma and red cell concentrations of dihomogamma linolenic and arachidonic acids. 188 women completed the trials: 97 received Efamol and 91 received placebo. Pain was assessed immediately prior to menstruation in each menstrual cycle by 100mm analogue scale. In one centre, the trial lasted two months, in another, three months and in the third, five months, but otherwise the trials were virtually identical. The dose was 8 x 500mg capsules per day. At the end of the trial there was no improvement in the placebo group but the Efamol group experienced significant relief of pain. The effect was analysed by non-parametric statistics and was shown to be significant at $2p = 0.0014$ for the change from baseline and at $2p = 0.0114$ for the difference between Efamol and placebo. There were no important adverse events. Efamol did not change levels of ovarian hormone.

Efamol is a safe and effective non-endocrine treatment for breast pain which has just received a licence for use in the UK National Health Service.

Efamol Research Institute, POB 818, Kentville NS, Canada B4N 4H8