specifically suppress apo(a) synthesis besides its effect on cholesterol metabolism. Response of this magnitude to niacin is rare, and may be connected to the rarity of this patient's apo(a) phenotype ("F").

## 15 PHASIC SERUM LIPID EXCURSIONS DURING CYCLIC ORAL CONJUGATED ESTROGENS (OCE) BUT NOT DURING TRANSDERMAL ESTRADIOL (TE) SEQUENTIALLY COMBINED WITH ORAL MEDROXYPROGESTERONE ACETATE (MPA)

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Recent data indicate that oral progestins have rather unfavorable effects on serum lipid fractions when added to estrogen replacement therapy. The purpose of this study was to compare the serum lipid fractions at day 1 of the replacement cycle, at day 14 of currently prescribed doses of OCE (0.625 mg) and TE (50 µg) and after addition of 5 mg of oral MPA (day 25). Forty-two early post-menopausal women were randomized between the two treatment groups and matched with fifteen controls who elected not to receive hormonal replacement. Patients were seen at cycles 1 to 6, 9, 12, 18 and 24.

After 14 days of OCE, there were significant decreases in C, LDL-C, and Apo B and significant increases in TG, HDL-C, HDL-C and Apo A1. The sequential addition of MPA accentuated the reduction of LDL-C and Apo B but partially attenuated the elevation of TG, HDL-C and Apo A1. By contrast at the end of 14 days of TE there was only limited increase in HDL-C without significant rise in Apo A1. The subsequent addition of MPA to TE was associated with an obliteration of the increase in HDL components. These combined changes resulted in a significant reduction in the LDL-C/HDL-C ratio and in a significant elevation in the Apo A1/Apo B ratio only in the OCE/MPA group.

Overall OCE induced significant favourable intragroup changes in C fractions whereas TE rather maintained lipids to levels not different from baseline. The sequential addition of MPA dit not affect the beneficial effect of estrogens on ratios of C fractions but rather attenuated the unfavourable effect of OCE on TG.

## 16 SEQUENTIAL ESTROGEN-PROGESTIN ADDBACK TO GNRH AGONIST SUPPRESSION FOR THE CHRONIC TREATMENT OF OVARIAN HYPERANDROGENISM

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The purpose of this pilot study was to evaluate the efficacy and safety of a sequential regimen of estrogen-progestin addback to GnRH agonist suppression in ovarian hyperandrogenism. Eight patients presenting with a polycystic ovarian syndrome (PCOS) were treated with a s-c implant of GnRH agonist every 4 weeks for 48 weeks. Starting at week 9, patients were replaced with 100 µg transdermal estradiol (TE) patches continuously and with 10 mg oral medroxyprogesterone acetate (MPA) the last 2 weeks of each 4 weeks period.

Initial GnRH agonist administration achieved rapid down-regulation of LH and FSH, suppression of estradiol ($E_2$) to menopausal levels and significant reduction of testosterone (T) by 48.9% and androstenedione (AD) by 67.4% of baseline. During steroid addback serum $E_2$ fluctuated in the early follicular range whereas T and AD continued to decrease gradually. Baseline hirsutism score (18.7 ± 1.3) progressively decrease to 9.7 ± 2.0 at the end of treatment. A withdrawal bleeding was obtained in 63.6% of the artificial cycles but breakthrough bleeding occurred during 48% of the sequential replacements. There were no significant effects of the treatment on bone mineral content (BMC) of the lumbar spine or femoral neck, in $Ca^{2+}$ creatinine and OH-proline/creatinine ratios and in serum lipids (TG, C, HDL-C, LDL-C).

Addback of TE periodically combined with MPA is effective in reducing hirsutism and safe in minimizing side effects and bone loss. A steroid addback regimen allowing a better bleeding control would make this approach a valuable alternative for long term treatment of PCOS.

## 17 THE METABOLIC EFFECTS OF DIET ON RAT LIVER ACYL-CoA BINDING PROTEIN (ACBP)

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Acyl-CoA binding protein (ACBP) is a newly discovered 10kda protein which has been shown to bind acyl-CoA moieties with high affinity and to stimulate medium-chain fatty acid synthesis by goat mammary gland fatty acid synthetase. Its potential role as a carrier protein in intermediary lipid metabolism has recently been emphasized (Proc Natl Acad Sci, USA 1992; 89:11287-11291; Mol Cell Biochem 1993; 123:129-138). We purified ACBP to homogeneity from rat liver and used it to generate a polyclonal antisera against ACBP in the rabbit. This antisera was subsequently used to develop a radioimmunoassay method for the detection of ACBP in tissues and subcellular fractions isolated from rats that had been fasted, fed normal chow and a high fat diet. Fasting for 48 hours significantly decreased tissue levels of ACBP in the liver (66.5 ± 13.1 vs 39.5 ± 6.2 pg/ng DNA) whereas feeding a high fat diet significantly increased the