

Our study of lipid metabolism in oral contraceptive users also confirmed our original observations (Publications 78, 81). We found that in 164 subjects, serum cholesterol was slightly but significantly elevated, while they were taking oral contraceptives and serum triglyceride markedly so. About 90 per cent of the subjects showed elevation of serum triglyceride levels (Fig. 5). We also confirmed that the low density and very low density serum lipoproteins were higher when the women were using oral contraceptives, compared to the levels when they were not.

Neither in our studies of carbohydrate or lipid metabolism were we able to identify any patient characteristic such as age or family history of diabetes, which enabled us to predict in which patients these metabolic changes were likely to be most distinct, nor were we able to show any significant difference between the effect of various oral contraceptive combinations.

The metabolic changes I have outlined here have been confirmed in many studies and have been reviewed in detail in the Second Report on the Oral Contraceptives by the Advisory Committee on Obstetrics and Gynecology, Food and Drug Administration, August 1, 1969.

I would like now to describe very briefly five clinical cases which exemplify the metabolic changes I have described as being due to oral contraceptive steroids.

*Case 1.* E.M. (Fig. 6) is a young woman who exemplifies impairment of glucose tolerance (chemical diabetes) with high insulin levels due to contraceptive medication. She was without symptoms.