

that the values that we commonly found in women were modified in the direction more commonly found in men.

In other words, we found an abnormality of the lipoproteins pattern of a type which we find in men. Again what is the significance of this? It all leads one's thoughts in the same direction, and the thoughts are these.

Abnormalities of glucose tolerance, impairment of glucose tolerance, and elevation in lipid value and an alternation toward the male pattern lead one to suppose that there may be a risk of the development of the accelerated development of hardening of the arteries or atherosclerosis as it is more correctly known.

The studies we carried out were called cross sectional in the sense that we had a group of women who were users and another group of women who were nonusers. We decided to repeat these studies using the same women as the controls. We investigated them before they started taking the medication, and then at intervals after the medication had been administered, and on page 10 there is a diagram with quite a number of curves on it. I am only to refer to the two left-hand curves. The one represents the glucose tolerance mean curve, and the one at the bottom on the left-hand side represents the insulin curve.

I have so far not mentioned the insulin.

To be brief, what we found was that the impairment of glucose tolerance which we had observed before, was reproduced in these women, and in addition we found that the insulin levels, the hormones which normally controls glucose metabolism, that the insulin values were higher in these women than when they were users.

Insulin-glucose interrelationships and their interrelationships with fat metabolism and the relationships of these three to the accelerated development of atherosclerosis is one of the main medical topics of our time.

On the following page I show you data relating to what happens to a group of women with abnormal glucose tolerance when the medication is stopped and you see that after an interval of 6 weeks to 3 months, the interval since the medication was stopped, that the glucose tolerance curve returns toward normal when the medication is discontinued, so that at any rate was encouraging.

The abnormalities we observed were potentially reversible. I should add that the abnormalities were quite silent. Patients were not coming to the clinics to say, "I think my triglyceroid is elevated," or "My glucose tolerance is abnormal," and the doctors were not saying to the patients, "We think it is time that you had your blood chemistry measured." It would be totally impractical had they done so.

Now, I am going to skip a little of the testimony, and refer now to a few individual case records. I have not selected these cases with the intention of sensationalizing this data. The data I am presenting to you has been given to the National Institutes of Health, Department of Child Health and Human Development, every year for the past 3 years in extenso; we had a 6-hour meeting with them on Tuesday in which we discussed this type of data also extensively. There is no question that this data has been selected out of a rare group of individuals.

These data can be observed relatively commonly.