

Table 2. Sex hormones & Free Androgenic Index in the postmenopausal women with CVD and control group

Parameters	Women with CVD N = 30	Control group N = 25
LH (mIU/ml)	41.44±4.08	38.46±5.42
FSH (mIU/ml)	45.39±3.19	41.74±6.31
E2 (pg/ml)	59.73±15.99	50.32±4.11
Testosterone (nmol/l)	2.92±0.54	2.43±0.27
SHBG (nmol/l)	61.23±10.54*	71.61±5.41
FAI	5.66±1.67*	3.38±0.35

*P ≤ 0.0001, CVD = cardiovascular disease, LH = luteinizing hormone, FSH = follicular stimulating hormone, E2 = estradiol, SHBG = sex hormone binding globulin, FAI = free androgenic index.

Discussion

The significant increase in postprandial serum TG, total and LDL cholesterol and atherogenic index with a significant reduction in HDL-C seen in this study contributes to the irregular lipid metabolism in postmenopausal women with CVD when compared to the healthy postmenopausal women.

insulinemia due to the ability of insulin to inhibit hepatic SHBG synthesis⁽¹²⁾. From the calculated value of FAI, which detects free testosterone, it could be said that the loss in circulating SHBG leads to greater bioactivity of circulating testosterone.

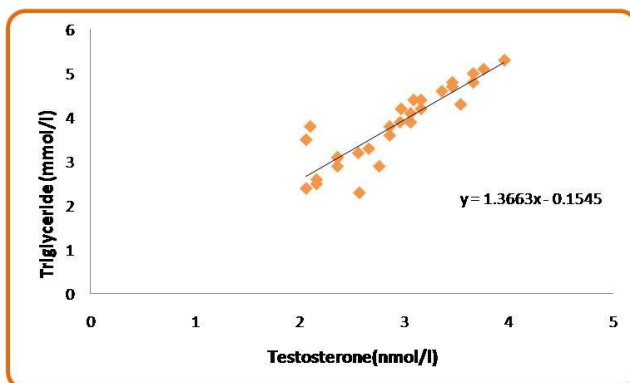


Fig. 1. The correlation between testosterone level and postprandial triglyceride in the postmenopausal women with cardiovascular disease

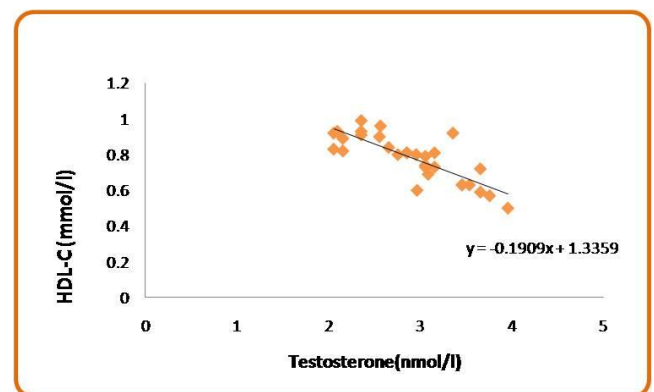


Fig. 2. The correlation between serum testosterone level and postprandial high density lipoprotein cholesterol in the postmenopausal women with cardiovascular disease

Studies had related these abnormalities in lipid profile to insulin resistance, which may cause elevation in LH and testosterone and reduction in FSH, E2 and SHBG^(7,8). The LH stimulates theca cells resulting in production of testosterone and androstenedione, whereas the FSH stimulates aromatase in the granulosa cells, resulting in aromatization of androgens to estrogens⁽⁹⁻¹¹⁾. The reduction in SHBG is related to hyper-

Measurement of postprandial serum lipids has been recommended as a better marker than fasting serum lipids for many diseases including the CVD, as it would catch the peak of serum TG during the 2-4 hours after meals which is believed to play an important role in the preparation for the process of atherosclerosis^(13,14).