Introduction
According to the endocrine society guidelines, GnRH analogues are used to suppress pubertal development of the natal sex in gender dysphoric adolescents. Subsequently, cross sex hormones can be given to induce pubertal development of the experienced gender. Limited data on the safety of this treatment are available.

With the dyshoric male-to-female (Mtf) adults, estrogen has been shown to result in a decrease in total, LDL- and HDL-cholesterol, whereas testosterone treatment in female-to-male (Ftm) results in an increase of total and LDL-cholesterol and triglycerides, and a decrease in HDL-cholesterol.

Objective
This study aimed to determine if GnRH and cross sex hormone treatment of gender dysphoric adolescents influences lipid levels.

Results
During two years of GnRH treatment a significant increase in total cholesterol (p = 0.013) and HDL-cholesterol (p = 0.017) was found in both sexes. LDL-cholesterol and triglycerides did not significantly change during these two years. (Figure 1)

Conclusions
In gender dysphoric adolescents puberty suppression during 2 years gave an increase of total and HDL-cholesterol. Estrogen treatment in Mtf led to a decrease in LDL-cholesterol levels, while testosterone treatment in Ftm led to a decrease in HDL-cholesterol levels. The implications of these changes for future health in gender dysphoric adolescents remain unclear. Gender dysphoric individuals treated according to the adolescent protocol should be closely monitored throughout adulthood.

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References