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# Hypothalamic GHRH and pituitary GH genes expression levels in neonatal inhibin-immunoneutralized female rats

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**FC015**

**EFFECT OF SECOND GENERATION COCS ON SERUM LIPID PROFILES, FASTING BLOOD SUGAR, BLOOD PRESSURE AND BMI IN CHILD BEARING AGE WOMEN IN KHYBERPUKHTUNKHWA PROVINCE-PAISTAN.**

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**Background:** Combined Oral Contraceptives Pills (COCs) are effective and widely used method for contraception. There is a positive relationship between COCs and lipid and carbohydrate metabolism in previous studies. We have seen the effect of duration of COCs (0.3mg norgestrel and 0.03mg ethinyl estradiol) used in tertiary care hospitals of Peshawar Khyber Pukhtunkhwa Pakistan on the lipid and carbohydrate metabolism.

**Study Design:** This cross sectional analytical study included 100 participants women of child bearing age 14-49yrs using COCs divided in three groups according to the duration of use group A at least 6 month COCs users, group B were 1 year COCs users , group C more than 1 year COCs users. Serum Total cholesterol (TC) , triglyceride (TG), high density lipoprotein cholesterol (HDL-C), low density lipoprotein cholesterol (LDL-C), very low density lipoprotein cholesterol (VLDL-C), fasting blood sugar(FBS) were determined by using standard colorimetric techniques BMI and BP were also measured in all subjects. Their levels were found gradually increasing from 6months to those who are using it for 1 year and more than 1year.

**Results:**

To estimate the effect of duration of use of combined oral contraceptives on the levels of different biochemical parameters, the results showed significant elevation of cholesterol (p-0.0003 ), HDL-C (p-0.0229), LDL-C (p-0.0271),VLDL-C (p- 0.0004 ),Triglycerides (p- 0.0006) levels in the group of more than 1 year users females when compared with 6 months users.

**Conclusion:** The levels of cholesterol, HDL, LDL, VLDL and Triglyceride levels were found to be increased with the duration of use.

**FC016**

**HYPOTHALAMIC GHRH AND PITUITARY GH GENES EXPRESSION LEVELS IN NEONATAL INHIBIN-IMMUNONEUTRALIZED FEMALE RATS**

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The present study has been designed to evaluate the potent role of prepubertal passive immunization against inhibin alpha subunit on mRNA expression level of hypothalamic GHRH and pituitary GH genes. The present study has been conducted by induction of inhibin immunoneutralization during rats female life early as 15-20 days. Forty eight neonate *Wistar* female rats (weighted 24.5±1.32 g., aged 15 days) were randomly assigned to two equal groups; treated and control, injected (ip) with inhibin- $\alpha$  antiserum (1 $\mu$ g dissolved in 100 $\mu$ l of normal saline) and normal saline (100 $\mu$ l), respectively, in the 15<sup>th</sup>, 16<sup>th</sup>, 17<sup>th</sup>, and 20<sup>th</sup> days of age. Eight females from each group were sacrificed in the 23<sup>rd</sup>, 30<sup>th</sup> and 45<sup>th</sup> days. Hypothalamus and Pituitary tissue samples were obtained for evaluation of mRNA expression level of GHRH and GH genes using qRT-PCR. In all of the experimental periods (23d, 30d and 45d), female rats of treated group showed up-regulation of hypothalamic *GHRH* and pituitary *GH* genes. In conclusion, passive immunization against endogenous circulating inhibin during neonatal age of female rats can perform an important role in sexual maturity, pituitary function and gonadal activity after puberty.

**Key words:** Inhibin, passive immunization, pituitary, hypothalamus