Genetic predisposition regarding eating disorder
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Introduction
Eating disorders are the third chronic disease among female teenagers and young people nowadays. We are facing a disease which has multi factor origin; the interaction between the genetic component with the environmental variables and their influence mediated by the physiological variables and the puberty1.

Malnutrition changes the correct running of the neurotransmitter systems, among other things. The hypothalamus maintains the nutritional balance of the body by activating or inhibiting the food intake through a complex tract of neurotransmitters. Different genes which are involved in those networks of neurotransmitters have been identified, and also, some studies have been researched in order to explain the influence of those genes in the eating disorders2.

Objectives
1. Knowing the genetic component's interactions with the environmental variables and their influence mediated by the physiological variables and the puberty.
2. Describing the genetic alterations involved in the serotonergic, monoaminergic, and noradrenergic tracts which are related with the eating disorders.

Methodology
• Bibliographical research of scientific articles, books and doctoral thesis in the data base PubMed. Keywords such as: “eating disorders and genes and feeding behavior disorders and gens".
• Extension regarding the searching of articles referenced in the main bibliography.
• Memory reduction and poster development.

Results
The scale of genetic effects on the symptoms of eating disorders varies significantly at different ages influencing during sexual maturation4,5.

There is a higher risk of developing eating disorders in relatives where there is one member who suffers an eating disorder5.

Serotonin system
Promoter region of polymorphism in the SLC6A4 gene
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Transcriptional activity
Reseptake 5-HT
Increased neurotransmitter levels - reduced food intake.

Dopamine system
Polymorphism in the DRD2 gene
A1: obsession with thinness
A2: lower dopamine receptor binding
Methylation in the D2 receptor - susceptibility to the development of TCA
Polymorphism in the COMT gene
Val 158 Met

Conclusions
• Epidemiological, relatives and twins studies suggest that genetic factors are involved in the pathogenesis of eating disorders and they are able of explaining between the 40% and 60% of susceptibility to these disorders.
• Our results show that certain genetic variants in serotonergic, dopaminergic and noradrenergic genes may have higher influence on eating disorders clinic.
• Candidate genes which have been associated with eating disorders are not enough for explaining them, because they behave as a characteristic pattern of complex diseases.

Bibliography