P-201 - VALUES OF THYROID STIMULATING HORMONE IN NEWBORNS WITH DOWN SYNDROME.

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**INTRODUCTION:** Down syndrome (DS) is the most frequent autosomal aneuploidy in humans, caused by the trisomy of chromosome 21. Mother’s age > 35 years is considered one of the main risk factors. Children with DS have a higher incidence of endocrine and autoimmune disorders than the general population. Few studies of TSH blood concentrations in newborns (NB) have been done in Mexico.

**OBJECTIVE:** To know the number of newborns with DS registered on newborn screening identification cards received in a centralized newborn screening laboratory from Mexico and to describe the values of TSH from that population.

**MATERIALS AND METHODS:** We identified all newborns with DS through the electronic system SySDQM\(^®\) and analyzed the results of quantification of human thyroid stimulating hormone (hTSH) obtained by fluorometric assay (GSP hTSH kits, Perkin Elmer\(^®\)) from 415 NB with DS compared to a control group of 1,712,936 NB non-affected with Down Syndrome.

**RESULTS:** We found 415 cases of NB with DS, finding a prevalence according to maternal age, they were classified as following; 1: 6,142 they were mothers <15 years old, 1: 7,864 were from mothers of 15-19 years old, 1: 5,716 were from mothers 20-35 years old; and in the group of mothers > 35 years old we found 1: 674. The mean of TSH concentration in blood in the group with DS was 1.34 ± 4.96, while in the control group without DS we found an average number of 0.87 ± 3.44 (p<0.0001).

**CONCLUSIONS:** In the studied population 1: 4127 NB presented DS, as expected the higher prevalence is in the group of mothers > 35 years old. The hTSH concentrations in the newborns with DS were higher than in the control group.