P-231 - DETERMINATION OF CUT OFF VALUES FOR: TSH, T4, IRT AND 17OHP USING MULTIPLEX METHODOLOGY IN URUGUAY.

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INTRODUCTION: In 2018 we evaluated a new technology based on multiplex determination. NeoScreen 4 from Intercientifica is a fluorimetric assay on xMAP platform that allows simultaneous quantification of 4 parameters: 17OHP, IRT, TSH and T4. In order to get simultaneous results, the assay uses high specificity proteins coupled to magnetic microspheres of different colors associated to the biochemical marker to quantify. The reactions are carry out on solution, T4 and 17-OHP are analyzed by a competition assay, while IRT and TSH in a like-sandwich assay. This technique has the advantage that use a single whole blood sample on filter paper for the four determinations. OBJECTIVE: Evaluate the cut off for TSH, T4, IRT AND 17OHP with multiplex technology. MATERIALS AND METHODS: During September 2018 we processed 1098 samples of whole blood obtained from heel prick on filter paper Whatman 903 of newborns with 2 days of life. All the samples were from babies with more than 37 weeks of gestational age. The samples were analyzed using multiplex technology: Neoscreen 4 kit, Hamilton automatic robot Nimbus and Magpix detector from Luminex. RESULTS: The cutoff values were calculated as 99 and 99.5 percentile to compare. For 99 percentile the results were: 17OHP 9 ng/ml, IRT 70 ng/ml, TSH 8.3 uIU/ml and T4 1.7 ug/dl. For 99.5 percentile the results were: 17OHP 19 ng/ml, IRT 84 ng/ml, TSH 8.6 uIU/ml and T4 1.4 ug/dl. CONCLUSIONS: The cutoff values calculated for our population correspond with the ones reported in the instructions of the commercial kit. To be conservative, in this first period, 99 percentile was establish as the cutoff.