P-196 - EFFECT OF IMPROVEMENTS IN THE POST-ANALITICAL STAGE OF NEWBORN SCREENING FOR CONGENITAL NEONATAL HYPOTHYROIDISM IN SANTA FE (ARGENTINA)

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INTRODUCTION: In Santa Fe, the Public Health system does not have a Newborn Screening Program for Inborn Errors of Metabolism (IEM), but there is a “Newborn Screening Laboratory Network for IEM” and a “Medical Network of Diagnosis and Therapies” doing transdiciplinary work. OBJECTIVES: a) To describe the strategy of the post-analytical stage that improved every marker. b) To estimate: 1-Time to diagnosis. 2-Time to treatment starting. 3-Provincial coverage.

METHODOLOGY: 1-We designed algorithms in order to locate patients with positive screening results. 2-Diagnosis procedures were updated in consensus interdisciplinary meetings. 3-Three pediatric coordinators were incorporated to the Network. Location algorithm for newborns with abnormal results: TSH ≥ 9 µIU/ml (UMELISA TSH-neonatal, Cut-off: 9 µUI/ml, 99% percentile), physician is informed and confirmation is organized. If no response is obtained after 2 (possible case) and 5 days (suspected case), the pediatric coordinator is notified and he locates the child through the Primary Health Care Informatic System (SICAP). Diagnosis protocol: Serum TSH ≤ 5 µIU/ml and fT4 ≥ 1.4 ng/dl: normal patient; 5 µIU/ml < serum TSH ≤ 9.99 µIU/ml with fT4 ≥ 1.40 ng/dl: repeat the assay between 7 to 15 days of life (same as a normal screening infant of a hypothyroid mother); serum TSH slightly increased with normal fT4: remain under laboratory and medical control for a while to define the case; TSH ≥ 10 µIU/ml, and low values of fT4: patients are referred to an endocrinologist, complementary studies are carried out, and treatment begins (Chemiluminescent immunoassay). Mean diagnosis time and mean time of treatment starting were calculated for all affected patients in 2017, coverage by statistical records of the laboratory and data from the Direction of Statistics of the Health Ministry. RESULTS: 28.114 samples out of 27.376 newborns were analyzed. Out of 119 positives: hypothyroids under treatment: 24, controlled hyperthyrotropinemias: 6, normalized: 17. Five borderline newborns with no response were located and studied. False positives: 67. Diagnosis time: 16 days. Time of treatment starting: 19 days. Coverage: > 98%. CONCLUSIONS: This strategy allowed to locate 100% of newborns with positive screening results and to refer them to specialised medical services.