TITLE: Galactosemia among Positive-screened Patients who Underwent Lactose Challenge: A Review of Records of the Newborn Screening Program

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## ABSTRACT (upto 300 words)

**Background.** Newborns screened positive for Galactosemia through Expanded Newborn Screening (ENBS) with borderline levels undergo lactose challenge that requires interruption of breastfeeding temporarily then shifting to soy-based formula.

**Objective.** To determine the percentage of Classical Galactosemia (CGal), Non-classical Galactosemia (NCGal), probable mild variant form, and negative Galactosemia among newborns screened positive for Galactosemia who underwent lactose challenge.

**Methods.** This is a retrospective study. NBS records were reviewed, and data were collected from January 2015 to December 2020.

**Results.** Out of the 117 newborns screened positive for Galactosemia, 58 underwent lactose challenge. Majority were male, term with a birth weight of 2500-4000g and received a final disposition in 4-6 months. Fifteen patients underwent 1-week lactose challenge wherein six reached a resolution on first challenge. Majority, 35 (60.3%) were negative for Galactosemia, six (10.3%) probable mild variant Galactosemia, three (5.2%) NCGal, and no CGal were observed. Fourteen suspected cases (24.1%) are pending final disposition.

**Conclusion.** This study describes the demographics of newborns flagged for Galactosemia who underwent lactose challenge. A 1-week lactose challenge may be recommended to further detect patients who are negative for Galactosemia.

Keywords: galactosemia, ENBS, lactose challenge

## **BIOGRAPHY** (upto 200 words)

Dr. Mary Erika V. Orteza had her Doctor of Medicine at Saint Louis University, Baguio City Philippines (2008 - 2012) and passed the Physician Licensure Examination last August 2013. She had her Internship at Saint Louis University- Hospital of the Sacred Heart and Pediatric residency Training at Baguio General Hospital and Medical Center (2014- 2017). She was a Medical Specialist II at Nueva Vizcaya Provincial Hospital, Bambang, Nueva Vizcaya (June 2017- November 2018), Medical Officer at Pines City Doctors Hospital (August 2017-November 2018) and Medical Officer IV (December 2018-2020) at Baguio General Hospital before she went to Fellowship Training on Clinical and Metabolic Genetics at Philippine General Hospital, Manila (January 1, 2020 to December 31, 2021).

Currently, she is a Medical Officer IV at Baguio General Hospital and a Geneticist consultant at Center for Human Genetics Services, National Institute of Health- Manila. She heads the Genetics Subspecialty OPD of BGH and is a member of the Newborn screening Continuity Clinic of Cordillera Administrative Region, Benguet, Philippines. She is a member of Baguio Benguet Medical Society and Philippine Medical Association (September 2017), Philippine Pediatric Society- Northern Luzon Chapter (2019) and a Diplomate of the Philippine Pediatric Society.

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