RES-042

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Evaluating the clinical utility of TORCH screening in neonates with isolated IUGR: A single centre retrospective analysis

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BACKGROUND

- TORCH infections, encompassing Toxoplasma gondii, Rubella, Cytomegalovirus (CMV), and Herpes Simplex Virus (HSV), are congenital infections associated with significant foetal and neonatal morbidity, including intrauterine growth restriction (IUGR).
- IUGR is characterized by foetal growth below the 10th percentile for gestational age, identified via ultrasound, without additional clinical signs in isolated cases.
- TORCH screening is frequently conducted in neonates with isolated IUGR to detect these infections as a potential cause, despite limited evidence supporting routine use in the absence of other symptoms.
- The screening process typically involves serological tests for IgM and IgG antibodies, PCR for viral or parasitic DNA, and clinical correlation through imaging or physical findings.
- Controversy surrounds routine screening due to its low diagnostic yield in isolated IUGR, as studies suggest minimal positive results without accompanying symptoms. [1-3]
- False-positive results, particularly for CMV and HSV, often arise from maternal antibody transfer or cross-reactivity, complicating interpretation.
- Additionally, routine screening increases healthcare costs, laboratory workload, and parental anxiety without clear clinical benefits.
- This study aims to evaluate the diagnostic yield and clinical utility of TORCH screening in neonates with isolated IUGR at a single centre, assessing its impact on clinical management.

METHODS

Study Design

- A retrospective analysis was conducted to evaluate the diagnostic yield of TORCH screening in neonates with isolated intrauterine growth restriction (IUGR).

Study Setting

- The study was performed at the National Hospital, Galle, Sri Lanka.

Study Period

- Data were collected from medical records of neonates tested between 1st January 2024 and 31st December 2024.

Study Population

- Neonates undergoing TORCH screening were included, categorized into two groups:
  1. Neonates with isolated IUGR
  2. Neonates with IUGR plus additional clinical symptoms

Sample Size and Sampling Method

- A total of 155 laboratory requests forms were reviewed.

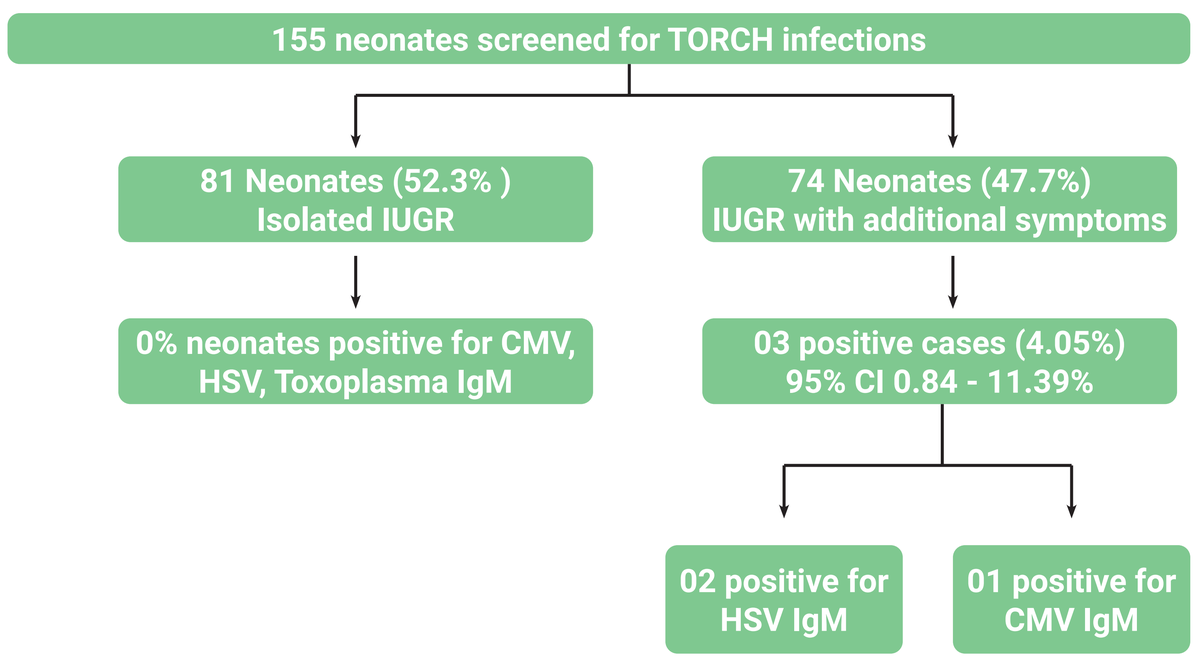
Data Collection Methods

- Laboratory requests forms were reviewed to identify indications for TORCH testing and serology results for Toxoplasma gondii, cytomegalovirus (CMV), and herpes simplex virus (HSV).

Data Analysis

- Data were analyzed using descriptive statistics to determine the proportion of positive TORCH screens in each group. The 95% confidence interval for positive results was calculated using SPSS version 25.

RESULTS



CONCLUSION

- Routine TORCH screening in neonates with isolated IUGR demonstrated no diagnostic yield, with 0% positive results, indicating limited clinical utility in this group.
- Positive results (4.05%) were confined to neonates with IUGR and additional symptoms, such as hepatosplenomegaly, jaundice, or hydrocephalus, suggesting that selective screening based on clinical findings or maternal history is more effective.
- Avoiding routine screening for isolated IUGR could reduce healthcare costs, laboratory burden, and parental anxiety without compromising care.
- Larger studies are needed to confirm these findings and establish guidelines for targeted TORCH screening in neonates to optimize clinical practice.

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DISCLOSURES

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