

3rd Annual Summit on

CLINICAL PEDIATRICS AND CARDIOLOGY & INFANCY, CHILD NUTRITION AND DEVELOPMENT

October 16-18, 2017 New York, USA

Calretinin expression in Hirschsprung disease – a potential marker of ganglion cells

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Background & Objective: This study was designed with an objective of observing Calretinin as Immunohistochemical marker for aganglionosis and for detection of ganglion cells in the affected areas for more accurate and better diagnosis of the disease.

Study Design: It was an observational, descriptive study.

Setting: It was carried out at Department of Morbid Anatomy and Histopathology in University of Health Sciences (UHS) Lahore.

Period: The study commenced in March 2016 after approval of the synopsis by the Advance Studies and Research Board of UHS and was successfully completed in December 2016.

Methodology: Biopsy Specimens of colon which were considered for the study were collected from 73 patients from Mayo Hospital, Lahore with well-established histopathological diagnosed HSCR.

Results: 52/73(71.23%) of the patients were male and 21/73(28.77%) were female. The mean age was 12.52 ± 9.21 months. In agreement with clinico-pathologic examination and sign and symptoms, 69/73(94.5%) cases had long standing constipation, 68/73(93.2%) cases had vomiting, 47/73(64.4%) cases had fever, 31/73(42.5%) cases had a failure to thrive, 63/73(86.3%) of the patients had palpable abdominal masses and 20/73(27.4%) cases had enterocolitis. Ganglion cells were present in 42/73(57.53%) and absent in 31/73(42.47%) respectively. Convincing association of Ganglion cells was seen with history of enterocolitis, vomiting and chronic inflammation, $p\text{-value} < 0.05$.

Conclusion: It was consummated that Calretinin provides a reliable and very cost effective adjunctive test to be used routinely with H and E in diagnosing HSCR and consequently waiving off the need for unnecessary surgeries and repeated biopsies.

Biography

Mishal Sikandar completed her Master's in the Philosophy of Morbid Anatomy and Histopathology from University of Health Sciences, Lahore, Pakistan in 2017 under the supervision of Professor A H Nagi. She did her MBBS (Bachelors in Medicine and Bachelors in Surgery) from Fatima Memorial Hospital, Lahore Pakistan. She has written many research articles and presented papers worldwide and is serving as a Consultant Histopathologist now in a private teaching hospital in Lahore, Pakistan.

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