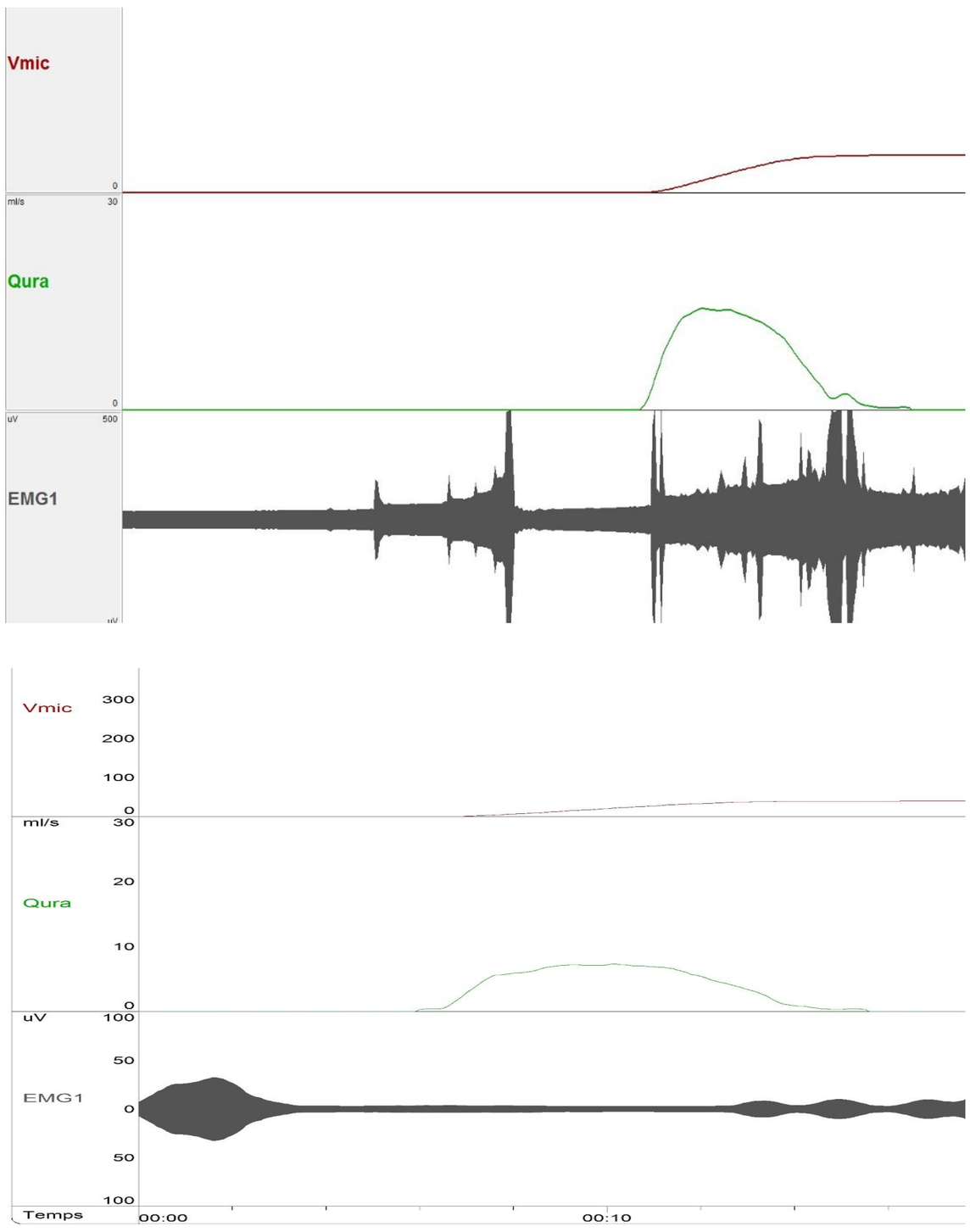
Abstract 393 :Assessment of lower urinary tract disorders in children with Hirschsprung disease

Yazidi M, Kabil A , Dades R, Boutalja H, Kyal N, Lmidmani F, El Fatimi A
University Hospital Ibn Rochd of Casablanca , PMR Department

Hypothesis / aims of study

Hirschsprung's Disease (HD) is a rare congenital disorder that usually causes severe constipation and bowel obstruction. This disease affects one in 5,000 babies born. However, some of these patients also develop lower urinary tract disorders.
The management of patients with Hirschsprung's disease aims mainly, by surgical intervention, at the achievement of normal bowel function. Hirschsprung's disease commonly presents with severe constipation, rarely associated with fecal incontinence. Also after operative procedures, constipation may be a complicating factor at follow-up. However constipation could be associated with other symptoms such as lower urinary disorders
The aim of this study is to assess the lower urinary tract disorders in children with Hirschprung's disease



Study design, materials and methods

The study was conducted at IBN ROCHD University Hospital during the period from 2021 to 2023. Forty eight patients with HD were included in the study. We realized a clinical assessement based on the urinary Handicap measure (MHU) combined with an uroflowmetric study for all the children adressed for rehabilitative care in our department.

Results and interpretation

Thirty eight patients were males and 10 were females, with a mean age of 4.4 years. 66% of patients had enuresis and 28% had at least one episode of urinary infection, debimetry results were normal in 69% of children, and abnormal in 31%. In uroflowmetric study, dysuria with detrusor sphincter dyssynergia and significant post void residual urine were found in the 15 symptomatic children.

Several mutations in the RET proto-oncogene have been identified in patients with HD and the RET gene plays a critical role in the embryogenesis of the enteric nervous system. The RET gene also plays an important role in the development of the urinary tract system by regulating the interaction of the ureteric bud and metanephric blastema. Urinary tract symptoms as a result of iatrogen denervation during surgical procedures must also be taken into consideration

Studies performed by some authors indicated an increased incidence of uroradiologic anomalies, most commonly ureteral dilatation, in patients with Hirschsprung's disease. Among the anomalies noted were vesico-ureteral reflux and hydronephrosis.These anomalies could be related to subbladder obstruction and dysuria such in sphincter dyssynergia found in our study.

In our study 66% of children were found to have enuresis and 31% had daily urinary tract symptoms, dominated by dysuria and lower tract infection .The results suggest that both bowel function and urinary tract function should be included in the evaluation of patients with HD before and after surgery.mptoms as a result of iatrogen denervation during surgical procedures must also be taken into consideration

Conclusions

Urinary tract anomalies and dysfunction deserve attention in the follow-up of children with HD. We suggest screening for urinary tract anomalies and urinary tract symptoms in follow-up of children with HD.

References

1.Hirschsprung's Disease and Urinary Tract Infection: Unrecognized Association Salam Yazbeck, Sean O Regan Nephron 43: 211-213
2.Urinary tract anomalies and urinary tract dysfunction in children with Hirschsprung disease—Is follow-up indicated? Journal of Pediatric Surgery 54 (2019)
3.Urological and sexual outcome in patients with Hirschsprung disease: A systematic review Journal of Pediatric Urology Volume 12, Issue 6, December 2016, Pages 352-360