Gallstone Disease in Children and Adolescents in Nova Scotia: A 20-Year Retrospective Review of Incidence, Complications, and Surgical Trends

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Introduction

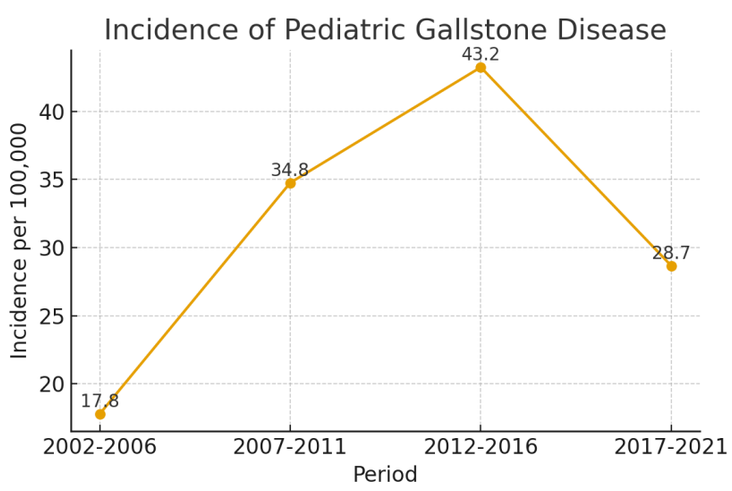
Gallstone disease in children, historically linked to hemolytic disorders, is increasingly recognized among otherwise healthy populations. Long-term data from the Canadian Maritimes are limited. We describe 20-year trends in incidence, presentation, risk factors, management, and outcomes for pediatric gallstone disease managed at the region's tertiary pediatric centre.

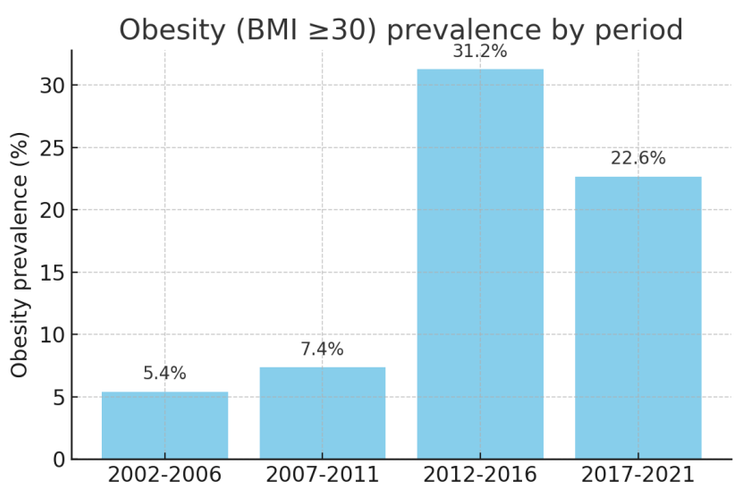
Methods

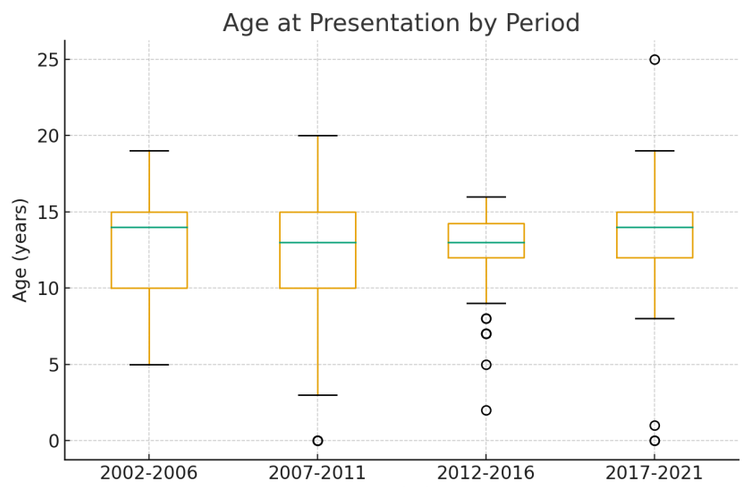
Retrospective cohort of patients <18 years admitted with gallstone-related disease or undergoing cholecystectomy at the IWK Health Centre (2002–2021). Cases were identified from institutional databases and confirmed by chart review. Demographic, clinical, and operative data were abstracted. Incidence was calculated using provincial population denominators. Standard statistical tests and Poisson/logistic regression assessed trends and associations.

Results

We identified 238 patients (mean age 12.6 years). Incidence increased markedly from the early 2000s, peaked in 2012–2016, and dipped modestly thereafter. Complicated presentations (choledocholithiasis, cholecystitis, pancreatitis) increased across periods. Obesity prevalence rose over time but was not independently associated with complicated disease. Most patients underwent laparoscopic cholecystectomy; postoperative complications were uncommon.







Figures 1–3. Incidence, Obesity, and Age Distribution.

Discussion

Rising incidence and complexity mirror national and international trends and carry implications for resource planning and early recognition pathways. Despite increasing complexity, surgical outcomes remained favorable at a tertiary pediatric centre. Limitations include retrospective design and potential under-capture of cases managed entirely in community hospitals.

Conclusion

Pediatric gallstone disease in the Maritimes has increased over two decades with a parallel rise in complicated presentations. Ongoing surveillance and strategies targeting modifiable risks are needed.

References

Selected references: Murphy PB et al. J Pediatr Surg. 2016;51:748–52. Khoo AK et al. J Pediatr Surg. 2014;49:284–8. Sarrami M et al. Pediatr Surg Int. 2019;35:569–74.

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