Appendectomy Versus Observation for Appendicitis in Neutropenic Children With Cancer

Benjamin T. Many, Timothy B. Lautz, Sarah Dobrozsi et al.
ON BEHALF OF THE PEDIATRIC SURGICAL ONCOLOGY RESEARCH COLLABORATIVE

Pediatrics February 2021, 147 (2) e2020027797
https://doi.org/10.1542/peds.2020-027797

BACKGROUND: Optimal management of **neutropenic appendicitis (NA)** in children undergoing cancer therapy remains undefined. Management strategies include upfront appendectomy or initial nonoperative management. The study aimed to characterize the effect of management strategy on complications and length of stay (LOS) and describe implications for chemotherapy delay or alteration.

METHODS: Sites from the Pediatric Surgery Oncology Research Collaborative performed a retrospective review of children with NA over a 6-year period.

ACADEMIC P.E.A.R.L.S

Pediatric Evidence And Research Learning Snippet

Appendicectomy in neutropenic children with cancer: To do or not to do?

Benjamin T. Many, Timothy B. Lautz, Sarah Dobrozsi et al. Pediatrics February 2021, 147 (2) e2020027797

Results:

Sixty-six children, with a median age of 11 years (range 1–17), were identified with NA while undergoing cancer treatment. The most common cancer diagnoses were leukemia (62%) and brain tumor (12%). **Upfront appendectomy was performed in 41% of patients; the remainder had initial nonoperative management.** Rates of abscess or perforation at diagnosis were equivalent in the groups (30% vs 24%; *P* = .23). Of patients who had initial nonoperative management, 46% (17 of 37) underwent delayed appendectomy during the same hospitalization. Delayed appendectomy was due to failure of initial nonoperative management in 65% (*n* = 11) and count recovery in 35% (*n* = 6). Cancer therapy was delayed in 35% (*n* = 23). Initial nonoperative management was associated with a delay in cancer treatment (46% vs. 22%, *P* = .05) and longer LOS (29 vs 12 days; *P* = .01). **Patients who had initial nonoperative management and delayed appendectomy had a higher rate of postoperative complications (*P* < .01).**

Conclusion:

In pediatric patients with NA from oncologic treatment, upfront appendectomy resulted in lower complication rates, reduced LOS, and fewer alterations in chemotherapy regimens compared to initial nonoperative management.

EXPERT COMMENT

“Surgical versus conservative medical therapy in appendicitis in setting of pediatric cancers is often a major dilemma. Surgical appendicectomy may be considered in tertiary care oncology centers with ambient hospital setup. Upfront appendicectomy prevents frequent interruptions in chemotherapy which may lead to a better final outcome for the patient.”

Dr. Moinak Sen Sarma, DM
Associate Professor, Dept of Pediatric Gastroenterology
Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India

With warm regards,

Reference

Many BT, Lautz TB, Dobrozsi S, Wilkinson KH, Rossoff J, Le-Nguyen A, Dakhallah N, Piche N, Weinschenk W, Cooke-Barker J, Goodhue C, Zamora A, Kim ES, Talbot LJ, Quevedo OG, Murphy AJ, Commander SJ, Tracy ET, Short SS, Meyers RL, Rinehardt HN, Aldrink JH, Heaton TE, Ortiz MV, Baertschiger R, Wong KE, Lapidus-Krol E, Butter A, Davidson J, Stark R, Ramaraj A, Malek M, Mastropolo R, Morgan K, Murphy JT, Janek K, Le HD, Dasgupta R, Lal DR; PEDIATRIC SURGICAL ONCOLOGY RESEARCH COLLABORATIVE. Appendectomy Versus Observation for Appendicitis in Neutropenic Children With Cancer. Pediatrics. 2021 Feb;147(2):e2020027797. doi: 10.1542/peds.2020-027797.