

Retrospective Review of Pediatric Polypectomy Cases at Riley Hospital for Children

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Background: Despite advances in adult polypectomy research — particularly favoring cold snare polypectomy (CSP) over cold forceps polypectomy (CFP) for polyps <10 mm — pediatric adoption has lagged due to the absence of pediatric-specific studies and formal guidelines. Pediatric endoscopists often rely on expert opinions and extrapolate from adult guidelines despite important differences in polyp pathology, procedural training, and safety considerations. In adults, CSP is associated with lower recurrence rates than CFP, lower delayed bleeding than hot snare polypectomy (HSP), and a higher risk of immediate bleeding. We aimed to assess whether similar patterns of techniques and complications were observed in a pediatric cohort.

Methods: We conducted a retrospective review of 395 polypectomy cases at Riley Hospital for Children from 2/2012 to 7/2025. Demographic, procedural, and post-polypectomy outcomes were collected and analyzed – with the latter category being our primary focus.

Results: Of the 395 procedures, HSP was used in 237 cases, CFP in 171, and CSP in 78 (some procedures used more than one technique). Immediate bleeding requiring intervention occurred in 15 cases (3.8%), most commonly following CSP (7/78; 9.0%) and HSP (5/237; 2.1%). Delayed bleeding requiring hospitalization occurred in 4 cases (1.0%), all following HSP (4/237; 1.7%) with 2 requiring repeat endoscopy (0.8%). Polyp recurrence was identified in 4 cases (1.0%), all after CFP (4/171; 2.3%).

Discussion/Implications: In this single-center retrospective review, our post-procedural findings align with adult data: the highest immediate bleeding rates occurred after CSP; the highest delayed bleeding rates occurred after HSP; and each polyp recurrence case occurred after CFP. These results suggest that adult findings may be applicable to pediatric practice, despite differences in polyp morphology, pathology, and procedural context. However, pediatric-specific evidence and formal guidelines are lacking; and multicenter or prospective studies are needed to better characterize complication risk, recurrence, and optimal polypectomy strategies in children.