




Utility of Routine Colonic Biopsies in Pediatric Colonoscopic Polypectomy for Benign Juvenile Inflammatory Polyps

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Disclosures

- None

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Background

- Pediatric Polyps
 - Common
 - Rectal bleeding
 - Untreated can lead to iron deficiency
 - Location and number variable
 - Requires histologic evaluation for diagnosis
- Are routine colonic biopsies in this setting warranted?

Lee, B.G. et al. Pediatr Gastroenterol Hepatol Nutr. 2012; 15(4): p. 250-5

Aims

- Determine the utility of performing routine colonic biopsies during pediatric polypectomy for benign juvenile polyps
- Investigate practice variations
- Calculate the added cost of these biopsies to our healthcare system

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Methods

- Retrospective chart review
 - Inclusion criteria:
 - Aged 1-18 years
 - Underwent complete colonoscopy with polypectomy
 - Exclusion criteria:
 - Known history or family history of polyposis syndrome
 - Findings suggestive of IBD
 - > 5 polyps seen at time of procedure
 - Incomplete documentation

Methods

- Study design continued...
 - Recorded:
 - Indication
 - Age at procedure
 - Number of polyps found
 - Gross and histologic findings, and management changes based on findings
 - Diagnosis of juvenile inflammatory polyp based on histologic examination

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Results

Total Patients Screened	141
Included Patients	72 (51%)
Male	89 (63%)
Mean Age in Years	6.5 (Range 1-17)
Indication for Endoscopy	
Hematochezia	71 (98.6%)
Abdominal Pain	1 (1.4%)

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Results

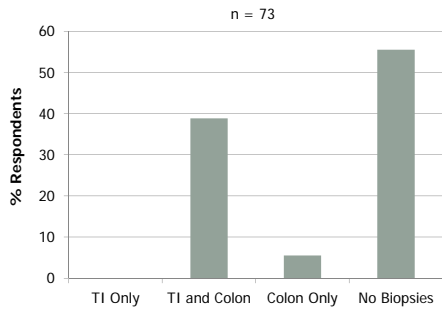
Polyp Histology	
Juvenile Inflammatory Polyp	68 (94%)
Vascular Hemangioma	1 (1.4%)
Polypoid Granulation Tissue	1 (1.4%)
Normal Colonic Mucosa	1 (1.4%)
Lymphonodular Hyperplasia	1 (1.4%)
Gross Findings	9 (12.5%)
Lymphonodular Hyperplasia	5 (6.9%)
Ulceration in the Sigmoid Colon	1 (1.4%)
Cecal Patch	1 (1.4%)
Large Boggy ICV	1 (1.4%)
Vascular Lesion in the Rectum	1 (1.4%)
Routine Colonic Biopsies Performed	55 (76%)
Colonic Histology	
Normal	47 (85%)
Active Colitis (Cecum/Ascending)	5 (9%)
Active Colitis (Sigmoid/Rectum)	1 (1.8%)
Chronic Colitis (Cecum/Ascending)	3 (5.5%)
Ileitis	1 (1.8%)
Management Change Based on Colonic Histology	0 (0%)

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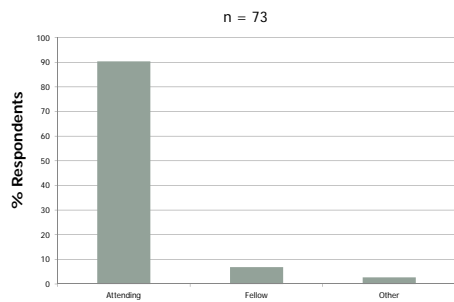
Survey

- What about other centers?

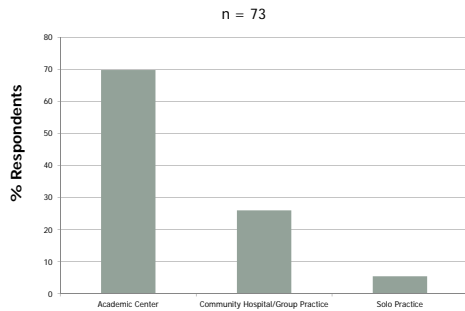
Biopsy Sites



Level of Practice



Practice Setting



Cost Analysis

- How much is the pathologic examination of routine colonic biopsies in this clinical setting costing us?

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Cost Analysis

# of children aged 1-18 years in the United States in 2013 (US Census Data)	90,801,861
# of children diagnosed with benign juvenile inflammatory polyp (0.9%)	817,217
# of these children having had routine colonic biopsies at the time of polypectomy (76%)	621,085
Charge for pathologic examination of additional 4 specimens for the above patients per our center	\$471 per specimen \$1,884 per patient Total: \$1,170,124,140
Reimbursement for pathologic examination of additional 4 specimens (Medicaid)	\$66.09 per specimen \$264.36 per patient Total: \$164,190,031
Difference	\$1,005,934,109

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Limitations

- Retrospective
- Small size
- Documentation
 - Unclear when polyp found during procedure
- Estimations used in cost analysis
 - Charges
 - Population size
 - Reimbursement based on Medicaid

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Conclusions

- Colonic biopsies had no effect on clinical outcomes or management in our study
- 44% of respondents perform routine biopsies in the absence of gross findings
- Overuse of pathology services, increased procedure time and risk, and added healthcare costs can be avoided
- Future investigations needed to confirm these conclusions

Thank You
