

Products	Snares																
Procedural Area	Polypectomy																
Article	A blinded comparison of the safety and efficacy of hot biopsy forceps electrocauterization and conventional snare polypectomy for diminutive colonic polypectomy in a porcine model.																
Publication	GIE Journal (2013; 77: 484-90)																
URL	http://www.giejournal.org/article/S0016-5107(12)02741-1/abstract																
Author	A.J. Metz, A. Moss, D. McCleod, K. Tran, C. Godfrey, A. Chandra, M.J. Bourke <i>Sydney, Australia</i>																
Purpose	Standardized, randomized, and controlled trial in a porcine model to evaluate the safety and efficacy of hot biopsy forceps compared with conventional snare polypectomy.																
Key Points	<p>10 living porcine models with artificial lesions were used to analyze polypectomy resections between hot biopsy forceps (HBF) and conventional snare polypectomy (CSP).</p> <ul style="list-style-type: none"> • HBF is often preferred over snare-based techniques for diminutive polypectomy even though it has been linked to incomplete resection, perforation, delayed bleeding, and serositis. • Eighty-two resections were evenly split between HBF and CSP techniques and the histological specimens were analyzed for depth of cut and thermal damage. <ul style="list-style-type: none"> ○ Visible mucosa remained on 14% of the resection sites with HBF while all CSP resections contained complete mucosal resection and a mean submucosal layer. ○ 21% of the specimens removed with HBF were completely ablated and could not be interpreted by pathology while all CSP specimens were interpretable. ○ Additionally, 62% of the HBF were crushed or affected by diathermy artifact. The difficulty with histological assessment on the HBF specimens could negatively impact cancer prevention and planning. ○ Depth of Thermal Injury at Polypectomy Sites <table border="1" data-bbox="570 1207 1344 1423"> <thead> <tr> <th>Injury</th> <th>CSP (N=41)</th> <th>HBF (N=41)</th> </tr> </thead> <tbody> <tr> <td>Partial MP Necrosis</td> <td>1 (2%)</td> <td>14 (34%)</td> </tr> <tr> <td>Full-Thickness MP Necrosis</td> <td>1 (2%)</td> <td>9 (22%)</td> </tr> <tr> <td>Full-Thickness Inflammation</td> <td>5 (12%)</td> <td>13 (32%)</td> </tr> <tr> <td>Histological Serositis</td> <td>4 (10%)</td> <td>13 (32%)</td> </tr> </tbody> </table> <p>HBF resulted in partial and full thickness muscularis propria (MP) necrosis in 56% of the lesions which is 10 times higher relative to CSP and serositis was 3 times higher for HBF resulting in an increased risk of large vessel bleeding and perforation when using this technique.</p>		Injury	CSP (N=41)	HBF (N=41)	Partial MP Necrosis	1 (2%)	14 (34%)	Full-Thickness MP Necrosis	1 (2%)	9 (22%)	Full-Thickness Inflammation	5 (12%)	13 (32%)	Histological Serositis	4 (10%)	13 (32%)
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Conclusions	The histological assessment of specimens from this study revealed that polypectomy using hot biopsy forceps leads to a higher rate of incomplete resection, a higher number of damaged/ablated specimens, and a greater risk of bleeding and perforation. The authors of this study concluded that the hot biopsy forceps technique is imprecise, less effective, and more hazardous relative to conventional snare polypectomy.																
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