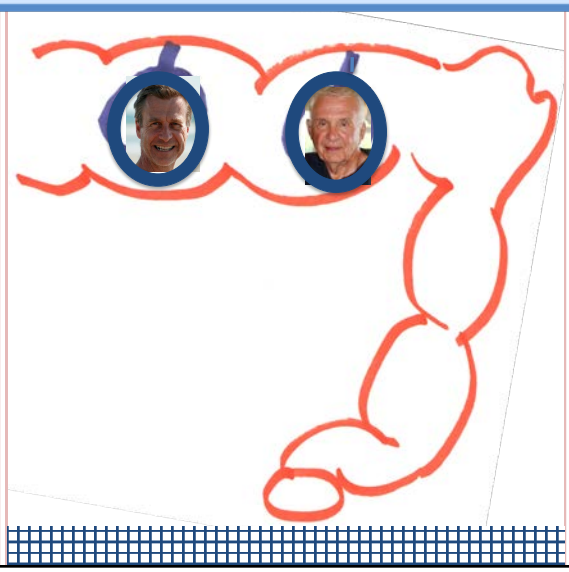
Pedunculated Polyps



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Faculty/Presenter Disclosure

Presenter: Robert Bailey

Relationships that may introduce potential bias and/or conflict of interest:

- **Grants/Research Support:** Intercept Pharma, Tobira Therapeutic, Abbvie, Inventiva
- **Advisory Board Member:** Gilead, Abbvie, Takeda, Merck, Janssen

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Faculty/Presenter Disclosure

Presenter: Jonathan Love

Relationships that may introduce potential bias and/or conflict of interest:

- **Grants/Research Support:**
- **Speakers Bureau/Honoraria:** Abbvie, Pendopharm
- **Consulting Fees:**
- **Other: Grand River** Cancer Clinic , Waterloo Wellington Endoscopy Lead

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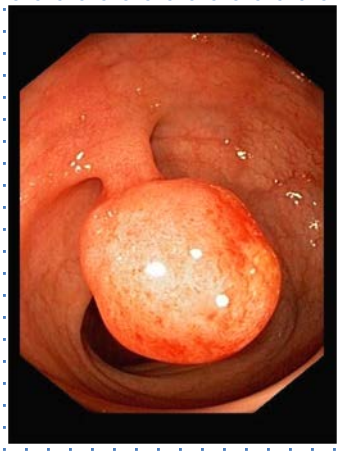
Pedunculated Polyps

About 13 percent of polyps are "pedunculated," hanging from the colon wall on a stalk like a cherry on a stem



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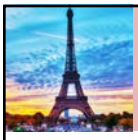
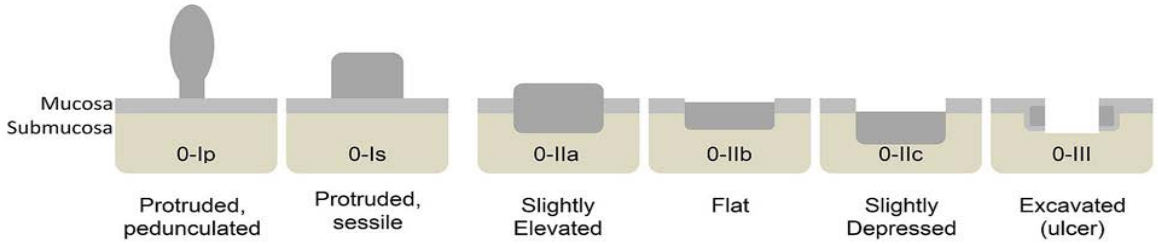


Paris Classification Of Polyps 2013



RECOMMENDATION

The European Society of Gastrointestinal Endoscopy recommends the gross morphology polyps should be described using the Paris classification system and sized in millimeters

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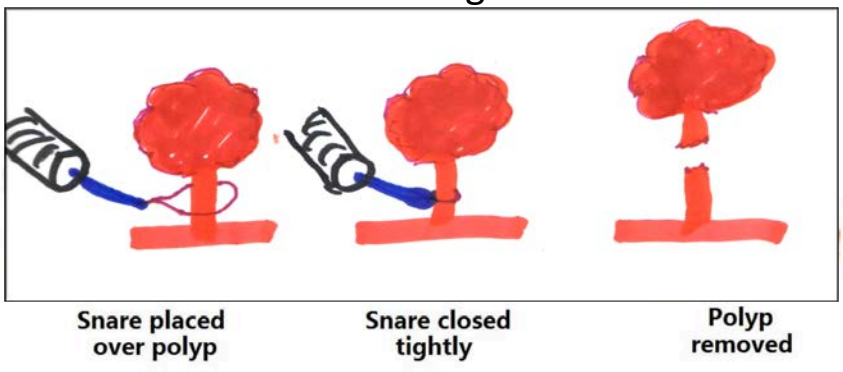
Pedunculated polyps are easier to spot and can be removed in one piece.

The head is where the precancer would be, so by snaring the stalk, we know without a doubt that it's gone



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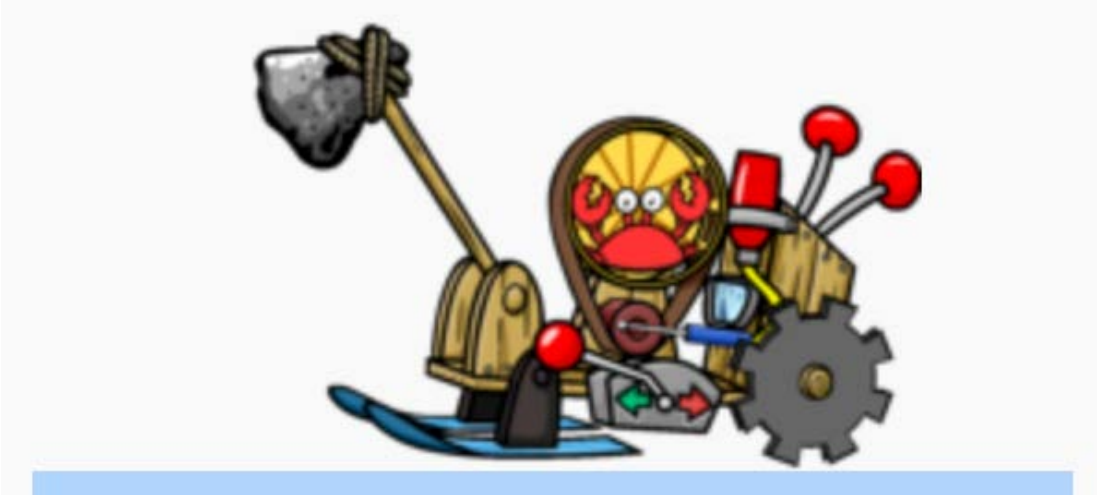
So You Want To Be A Polypectomist?



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Electrosurgical Units

- Electrosurgical units convert energy from high frequency currents into heat. When these currents flow from a snare wire through tissue, the high density current at the point of contact results in a sharp rise in tissue temperature
- Cutting currents are produced at temperatures greater than 100 °C, which leads to boiling of cellular water and subsequent cellular rupture
- Coagulation currents are produced at temperatures of 70 – 100 °C. This leads to dehydration and contracting of cells, without rupture
- Blended currents, the ratio of cells cut to those coagulated, can be varied
- The use of the micro processor controlled electrocautery generator for polypectomy is best using the ”Endocut” setting

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Don't

- Don't use coagulation current alone for polypectomy as there will be an increased risk of post procedural bleeding. Tissue thermal injury is more likely as is perforation
- Don't use pure cutting current alone for pedunculated polypectomy as there is an increased risk of intra-procedural bleeding

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Do

- Do use a blended current for resecting a pedunculated polyp This minimizes the risk of perforation
- Snare the pedicle away from the colon wall so as to reduce the risk of deep thermal injury
- The thicker the pedicle the more likely to find a bigger vessel

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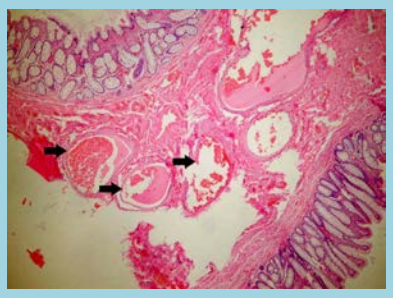
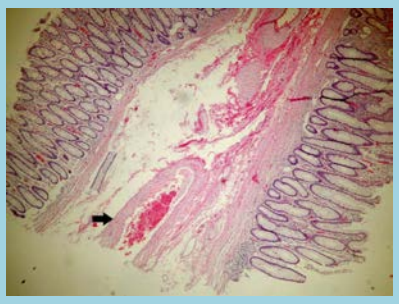
Stalk Pedicle Size Predicts Blood Supply



Thick stalk–several blood vessels



Thin stalk-one blood vessel

GASTROINTESTINAL ENDOSCOPY Volume 63, No. 7 : 2006

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What Snare Would You Use?
MONOFILAMENT OR POLYFILAMENT.

- Structurally, snares are either monofilament or polyfilament
- The potential advantage of monofilament snares is that the snare wire is thin (< 0.4 mm), so current density is greater, tissue transection swifter, and unintentional diathermic injury to the colonic wall less likely
- The potential advantage of polyfilament snares is that the wire is thicker (0.4 mm – 0.5 mm) and thus they may better grip the mucosal surface enabling more effective capture of flat polyps

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What Snare Would You Use?

- Limited data exist that compare the roles of different types of snares
- Use the snares you are familiar using and whose performance characteristics are known
- Snare size should be appropriately selected depending on the size and morphology of the polyp
- Snares come in different shapes (circular, oval, hexagonal, etc.) but no clear benefit of one shape over the other has been demonstrated.

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European Society of Gastrointestinal Endoscopy Recommends

Hot snare polypectomy for pedunculated polyps

To prevent bleeding in pedunculated colorectal polyps

with head ≥ 20 mm or a stalk≥10mm in diameter,

pre-treatment of the stalk with injection of dilute adrenaline

and/or mechanical hemostasis

Clips pre-cut and post-cut

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And The Most Effective?

Mechanical prophylaxis such as endoloops or endoscopic clips may be superior to adrenaline injections

ENDOLOOP

CLIP

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The Options To Prevent Polypectomy Bleeding

- ✓Endoloop
- ✓Clips
- ✓Injection adrenaline
- ✓Cut then clip

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Endoloop

Place an endoloop tightly around the base of the stalk prior to hot snare polypectomy

- The advantages of this approach are that haemostasis can be confidently assured, and the endoloop falls off spontaneously in the days or weeks following polypectomy, leaving a clean based resection site that can be easily inspected at surveillance

- The most common error is for the endoloop to be deployed loosely, such that haemostasis is not actually achieved

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Clips

Apply one or more endoscopic clips at the base of the stalk prior to polypectomy

- The main advantage of this approach is that endoscopic clips are usually easy to deploy
- The disadvantages of this approach include multiple clips often required to achieve haemostasis of large stalks, and indeed may not be feasible for some particularly large polyps, as the endoscopic clips may not be of a sufficient size to secure the stalk, even when multiple clips are applied

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Adrenaline

- Inject the stalk base with 1:10,000 adrenaline
- This shrinks the polyp, and reduces blood flow to the polyp head, and may then be followed by hot snare polypectomy

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Cut Then Clip

Hot snare polypectomy followed by clip deployment at the base of the resected polyp

- This is a very straightforward approach, but is associated with a risk of immediate intra-procedural bleeding that can occasionally be difficult to control
- This is the least preferred option, as that the other measures involve less risk

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Comparison Of Prophylactic Clip And Endoloop Application For The Prevention Of Post polypectomy Bleeding In Pedunculated Colonic Polyps: A Prospective, Randomized, Multicenter Study

The application of a prophylactic clip is as effective and safe as an endoloop in the prevention of post polypectomy bleeding in large pedunculated colonic polyps

Endoscopy 2014

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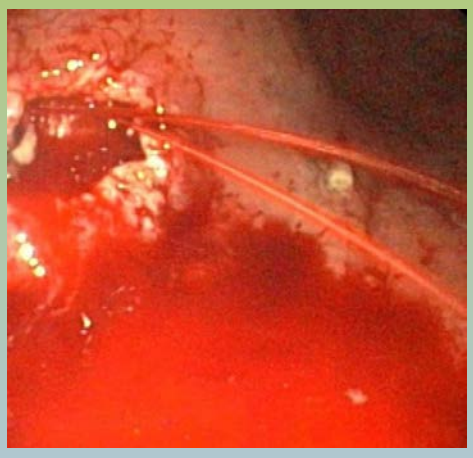
Post Polypectomy Bleeding – Yikes !



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Risk Factors For **Post Polypectomy Bleeding**

- Polyp size >10 mm,
- Stalk diameter >5 mm,
- Polyp location in the right colon
- Presence of malignancy within the polyp

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Polypectomy- Bleeding

1) Endoscopic coagulation (snare-tip soft coagulation or coagulating forceps)

Or

2) Mechanical therapy, with or without the combined use of dilute adrenaline injection

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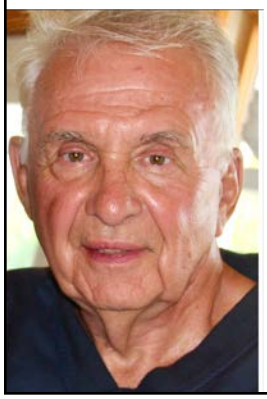
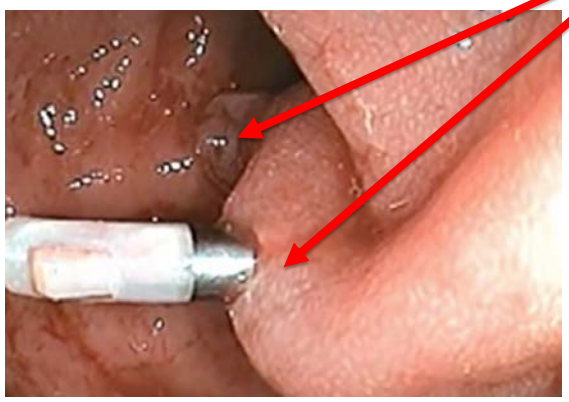
Pedunculated Polypectomy – A Job Well done





Thank You

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