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Endo Skills 2023: Faculty/Presenter Disclosure

- **Presenter:** **Rachid Mohamed**
- **Relationships that may introduce potential bias and/or conflict of interest:**
  - **Grants/Research Support:** None
  - **Speakers Bureau/Honoraria:** Pendopharm, Boston Scientific
  - **Consulting Fees:** None

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Endo Skills 2023
Disclosure of Commercial Support

- **This program has received financial support from:**
- **<u>Potential for bias/conflict of interest due to commercial support</u>:**
  - None

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Objectives

- Review appropriate technique of snare excision – hot and cold
- Discuss management of advanced pedunculated lesions

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Pedunculated lesions

- Two important considerations
  - Complete resection of adenomatous portion
    - Inspection of lesion for demarcation of polyp portion
  - Mitigation of risk, namely bleeding
    - Stalk houses vascular supply to polyp head
    - Risk is largely that of immediate bleeding, but delayed bleeding should be noted

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General approach

- <10mm
  - Can be taken with cold snare
- >10mm
  - Recommend removal with electrocautery
- Transection should be at the **middle to lower stalk** in order to provide adequate specimen for histologic assessment of stalk invasion
- Retrieve polyp specimen en bloc to ensure ability to assess resection margins rather than dividing polyp heads to facilitate through-the-scope specimen retrieval

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Complex pedunculated lesions

- Which stalks warrant pre-treatment consideration?
  - Stalk diameter > 5mm
  - Polyp head > 20mm
  - Difficult positioning
  - Patient factors for increased bleeding – ASA, NSAIDs, renal disease, etc

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Pre-treatment options

- Goal is to reduce (eliminate) immediate bleeding and prevent delayed bleeding
  - Pharmaceutical
    - Epinephrine for vasoconstriction
  - Mechanical
    - Clips
    - Ligature/loops
  - Electrocautery

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Epinephrine

- Limited data
- Small case series (n – 3) suggested reduced size of head and increased en bloc removal with 4-8cc of 1:10000 injection
  Hogan RB GIE 2007
- Comparison to mechanical ligation shows relative inferiority for immediate and delayed bleeding
  Kouklakis G Surg Endosc 2009

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Mechanical ligation

- Clips
  - Benefits include familiarity, rotatability, ease of application
  - Downside could be potentiation of cautery leading to wall injury
- Loops
  - Allow for secure, reliable control of stalk
  - Highly user dependent

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Endoloop

- Requires *understanding* and *communication* between MD and RN
- Incorrect deployment can result in significant increased difficulty and risk of incomplete resection
- Head to head (clips vs. loops) have shown similar bleeding risk (~5%)

Ji JS Endoscopy 2014

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A WORD ABOUT CAUTERY.....

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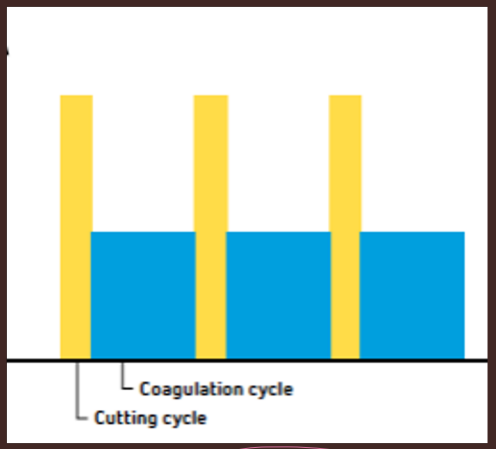
Basic principles

Controlled cutting of tissue with safe hemostasis

Endocut Q
- Monopolar, high frequency
- Alternating cycles of cutting and coagulation



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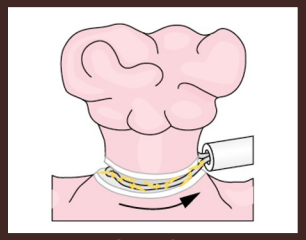
Electric arc between snare and tissue - >200V

Created as tissue fluid evaporation creates small space between tissue and snare

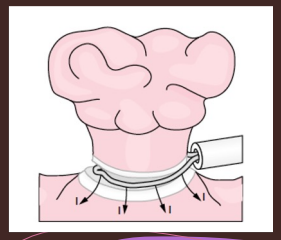
Detected automatically and cutting width reproducible



Cutting Phase

Tissue prepared for next cutting phase Ensures proper hemostasis prior to next cutting phase

Direction of coagulation directed toward base of polyp



Coagulation Phase

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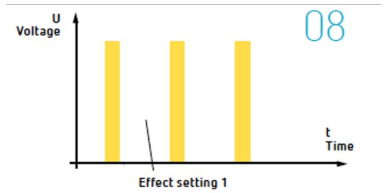
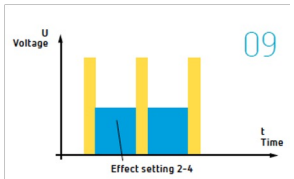


ENDO CUT Q with Setting 1:



The coagulation effect (blue) can be increased with ENDO CUT Q using the Effect Settings 2–4.

Effect setting

- Balance of polypectomy coagulation and risk of deep mural injury / perforation
- Settings 1 -4
  - Setting 1 - 'pure cut' with no coagulation
  - Setting 4 – maximized coagulation (400 Vp) between cutting phases

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What to use for polypectomy?

- European Society of Gastrointestinal Endoscopy 2017 Guidelines
  - ESGE suggest use of microprocessor-controlled electrocautery unit for polypectomy
  - Avoid pure coagulation use
    - Higher risk of deep mural injury, perforation and delayed bleeding
    - OR 2 for post-polypectomy bleeding when using an non-automated electrosurgical current
- For most standard polypectomy, can use Endocut Q – "3-1-3"
  - Effect 3
  - Cut duration 1
  - Cut interval 3

Bourke MJ et al Endoscopy 2017

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Take home points

- Pedunculated polyps require close examination to optimize goal of complete en bloc removal
- Never a fault to pretreat a stalk to reduce bleeding
- Understand the appropriate use of cautery settings to achieve safe removal

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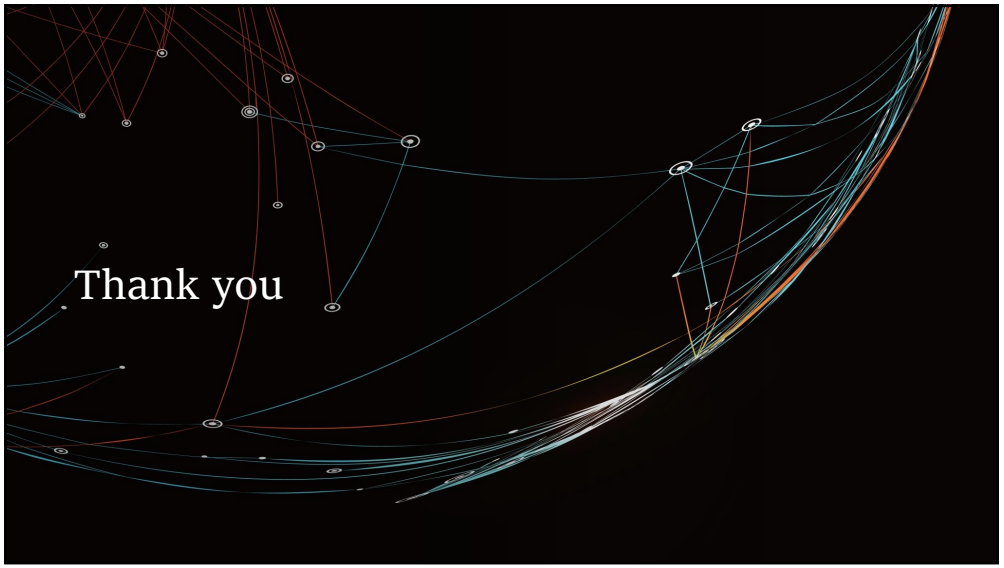

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