Say No to the Knife!

New Frontiers in Colon Polyp Management

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• 25% of colorectal surgeries are for non-malignant polyps

• Rate of surgery for benign polyps is increasing over last 15 years
Volume of surgery for benign colorectal polyps in the last 11 years

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Amsterdam, the Netherlands

- About 20% of surgical colon resections done for benign polyps.

- Only about 15% had an attempt at endoscopic polypectomy prior to surgical referral
• Surgery has mortality rate of 0.7%
• 14% rate of major post-op event
• 2% chance of needing colosotomy/ileostomy
• (and even higher for rectal lesions)
Myths, misunderstandings, barriers... that may lead to unnecessary surgery

- Presumption that the polyp is so big that it must have cancer

- Unawareness of newer techniques for management of difficult polyps

- Surgical referral made because “that’s what I always do”

- Current guidelines recommend referral to advanced endoscopist for large/difficult polyps, but not always happening.
First step is careful endoscopic assessment
Is the lesion “depressed” in the center?

Paris Classification
Cecal adenocarcinoma
• Very early malignancy; subtle central depression
Assessment of pit patterns and vessels

NICE classification
(NBI international colorectal endoscopic)

Kudo Pit Patterns

JNET (Japanese NBI Expert Team)
<table>
<thead>
<tr>
<th>Type</th>
<th>Pit pattern</th>
<th>Definition</th>
<th>Usual histopathological findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I</td>
<td>round pits</td>
<td>normal</td>
<td></td>
</tr>
<tr>
<td>Type II</td>
<td>asteroid or papillary pits</td>
<td>hyperplastic</td>
<td></td>
</tr>
<tr>
<td>Type IIIa</td>
<td>small tubular or roundish pits</td>
<td>intramucosal adenocarcinoma (28.3%) adenoma (73%) (depressed lesion)</td>
<td></td>
</tr>
<tr>
<td>Type IIIb</td>
<td>large tubular or roundish pits</td>
<td>adenoma (86.7%) (protruded lesion)</td>
<td></td>
</tr>
<tr>
<td>Type IV</td>
<td>branch-like or gyrus-like pits</td>
<td>adenoma (59.7%) (almost tubulovillous adenoma) intramucosal adenocarcinoma (37.2%)</td>
<td></td>
</tr>
<tr>
<td>Type V</td>
<td>non-structural pits</td>
<td>submucosal adenocarcinoma (62.5%)</td>
<td></td>
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</tbody>
</table>
Why assess pit/vascular patterns?

- To try to identify submucosal invasion
- ...which is better managed with en bloc resection
- ...which in some cases may need ESD
• Soon artificial intelligence image analysis will be leveraged to assess these features.
Flat and sessile polyps: laterally spreading tumors ("LSTs")

- "Granular" and "non-granular"

- Granular low chance of submucosal invasion; higher in non-granular
“Granular polyp”; Methylene blue chromoscopy
Non-granular elements
Obvious malignancy
Invasive cancer in a polyp (not resectable)
Very early malignancy
Hemostatic forceps
Retroflex for a better view
Marking around an indistinct flat polyp
Non-lifting sign (previous incomplete polypectomy)
Non-lifting polyp (previous resection)
Large pedunculated polyp
## EMR or ESD?

<table>
<thead>
<tr>
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<th>EMR</th>
<th>ESD</th>
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<tbody>
<tr>
<td>Procedure time</td>
<td>shorter</td>
<td>longer</td>
</tr>
<tr>
<td>Expertise required</td>
<td>++</td>
<td>++++</td>
</tr>
<tr>
<td>En-bloc resection</td>
<td>only if small enough, generally &lt;2cm</td>
<td>yes</td>
</tr>
<tr>
<td>Expertise required</td>
<td>++</td>
<td>++++</td>
</tr>
<tr>
<td>Cost of devices</td>
<td>$</td>
<td>$$$</td>
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</tbody>
</table>
Better to do ESD on this one
Full thickness resection device (FTRD, Ovesco)
Full Thickness Resection Device

 Courtesy of OVESCO
Full thickness resection for non-lifting polyp
Subtle rectal polyp; chromoscopy then FTRD
EndoRotor
EndoRotor
OTSC (over the scope clip) for closure of perforation

- Consider marking site with regular clip (easier to find defect on scope reinsertion)
Over the scope clip for perforation
Tattooing away from the polyp, and use sparingly
Tattoo too close to a polyp
In summary...

• There are an excessive amount of referrals to surgery for endoscopically removable colon polyps

• Careful endoscopic assessment before starting resection may help to identify those lesions which should be managed with an en-bloc resection

• Referral to an a specialist in management of large or complex colorectal polyps is best practice, and supported by GI societies
• There is a role for ESD in management of colorectal lesions, but most lesions can still be managed with piecemeal EMR

• Newer devices are allowing faster and simpler removal of some of these lesions
Thanks for your attention!