Guidelines on Surveillance of Colonic Polyps in the RIE

These guidelines are issued to facilitate uniformity of follow-up of colonic polyps in the Endoscopy Unit of the Royal Infirmary of Edinburgh.

DEFINITIONS & ASSUMPTIONS REGARDING POLYPS

- Colorectal polyps are neoplastic (adenomas) or non-neoplastic (metaplastic).
- Most colorectal cancers arise from adenomatous polyps.
- Simple (i.e. without villous component) and small (<1 cm) tubular adenomas are very common and have a low malignant potential.
- Advanced adenomas fulfill any of the following: a) large (≥1 cm) b) contain villous tissue c) demonstrate high-grade dysplasia.

DIAGNOSIS AND INITIAL MANAGEMENT

1) Colonoscopy is the most accurate method of detecting polyps of all sizes and it allows immediate biopsy or polypectomy. Most polyps can be completely resected during colonoscopy, using coagulation techniques (hot biopsy, argon plasma coagulation) or loop polypectomy.

2) Patients with polyps detected by barium enema or excised during flexible sigmoidoscopy, should undergo full colonoscopy to look for and remove additional lesions (synchronous adenomas).

The decision to perform full colonoscopy for patients with one polyp <1 cm should be individualised depending on:

- The patient's age,
- Co-morbidity,
- Past medical history or family history of colorectal cancer
- Histology of the removed polyp.

Additional colonoscopic examinations may be necessary 3-6 months after resection of large sessile adenomas or if the colonoscopist is not confident that all adenomas have been detected or completely resected because of multiple adenomas or other technical reasons.

If such a plan is decided the reason should be clearly stated by the endoscopist in the endoscopy report.

SPECIFIC ISSUES

A. Polyps

Small Polyps

- Small polyps (<1 cm) are usually resected using hot biopsy or argon plasma coagulation. Each technique has limitations and risks that need to be carefully considered.
- When small polyps are numerous, representative biopsies should be obtained and full colonoscopy is advisable if they were detected during flexible sigmoidoscopy.
- A hyperplastic polyp found during flexible sigmoidoscopy is not, by itself, an indication for a full colonoscopy.
- Controversy exists whether small distal adenomas predict the presence of proximal clinically significant adenomas; colonoscopy is generally advisable if more than one small adenomatous polyp are seen at flexible sigmoidoscopy and if the flexible sigmoidoscopy findings do not explain patient's symptoms.

Large Polyps - Sessile

Following successful colonoscopic excision of a large adenomatous sessile polyp (>2 cm) a follow-up colonoscopy in 3-6 months is advisable to determine whether resection was complete.

- If residual polyp is present, it should be resected and the completeness of resection should be rechecked in another 3-6 months. If complete resection is not possible after two examinations, patient should be referred for surgical therapy. It may be useful to mark the polypectomy site with India ink during excision of a large sessile polyp that may require subsequent surgery.
Large Polyps - Pedunculated
Following successful colonoscopic excision of a large adenomatous pedunculated polyp (>2 cm) a follow-up colonoscopy in 3-6 months is only necessary if the endoscopist or pathology cannot determine whether resection was complete.
If residual polyp is present at repeat colonoscopy, it should be resected. It may be useful to mark the polypectomy site with India ink during excision of a large polyp to help future assessment.

Post-polypectomy Surveillance
After a complete clearing colonoscopy following initial polypectomy, repeat colonoscopy to check for metachronous adenomas in 3 y for patients at high risk:
- Those who at baseline examination have multiple (>2) adenomas,
- Large (≥1 cm) adenoma,
- An adenoma with villous histology or high-grade dysplasia,
- Family history of colorectal cancer.
Repeat colonoscopy to check for metachronous adenomas should be performed in 5 y for patients at low risk. These are:
- Those who at baseline examination have only one or two small tubular adenomas (<1 cm)
- No family history of colorectal cancer.
After one negative follow-up surveillance colonoscopy, subsequent surveillance intervals can be increased to 5 yr for all groups.
If complete colonoscopy is not feasible, flexible sigmoidoscopy followed by a double-contrast barium enema is an acceptable alternative.

PLEASE NOTE: Selected patients particularly those at low risk for recurrent adenomas may not require surveillance. Follow-up surveillance should be individualized according to the age (in general no surveillance over 75y, although biological age is more important), co-morbidity of the patient, and should be discontinued when it seems unlikely that follow-up would either prolong or improve quality of life.

B. Cancer - Malignant Polyps
No further immediate treatment is indicated after colonoscopic resection of a malignant polyp (an adenomatous polyp with cancer invading the submucosa) if the following endoscopic and pathology criteria are satisfied:
- The polyp is considered to be completely excised by the endoscopist and is sent as a whole for pathological examination and the pathologist can accurately determine the depth of invasion, grade of differentiation, and completeness of excision.
- The cancer is not poorly differentiated.
- There is no vascular or lymphatic involvement.
- The margin of excision is not involved. Invasion of the stalk of a pedunculated polyp, by itself, is not an unfavourable prognostic criterion, as long as the cancer does not extend to the margin of stalk resection.

Follow up
- Patients with malignant polyps who fulfil the above criteria should have follow-up in about 3-6 months to check for residual abnormal tissue at the polypectomy site-this is particularly important for sessile polyps.
- After one negative examination, thereafter at 3y and if clear at 5y intervals.
- Patients not fulfilling the above criteria should be considered for surgery on the understanding that the relative risks of surgery should be balanced against the risks of metastatic spread for each individual.

Colonoscopic Surveillance Following Resection for Colonic Cancer
- Prior to resection the yield for synchronous colorectal Ca is approx 2% and for adenomas 25%. Provided that all synchronous lesions are removed either surgically or at colonoscopy prior to surgery, surveillance should be performed at 1y from date of surgery, thereafter at 3y and if clear at 5y intervals.
- Yield of surveillance at first 6mo-2y is 2-3% for anastomotic recurrence, 3-5% for metachronous Ca and 25% for adenomas.

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Prevention of Colorectal Adenomas
Modification of diet and lifestyle may prevent initial or recurrent colorectal adenomas. The following general recommendations may be of value:

- Low fat and high in fruits, vegetables, and fibre diet.
- Normal body weight should be maintained, and smoking and excessive alcohol use should be avoided.
- Daily dietary supplementation with 3 g of calcium carbonate may reduce the recurrence of adenomas.
- The role of chemo preventive measures (i.e., aspirin, NSAIDs, selenium, or folic acid) is under investigation.

KEY REFERENCES