

Editor's Comments

This article shows that the relative ease of performance of flexible sigmoidoscopy as a screening tool in symptomatic patients presenting to a surgical endoscopy clinic is greater in the male patients when compared with females. The suggestion here is that this should direct the logistic performance of an open access endoscopy clinic and its training both in terms of suite and list planning as well as in referral practice. This sort of management perspective may create a gender-based performance standard of practical significance for the conduct of such suites, however, this approach may raise more questions than it answers and in point of fact, the issues surrounding its principal benefits are quite complex. The logistics of flexible sigmoidoscopy as a screening tool in the patient presenting with rectal bleeding have been shown to be safe provided that it is selectively used in the context of the patient history. For example, rectal 'outlet-style' bleeding may be successfully managed in the context of a one-stop flexible sigmoidoscopy service where hemorrhoids, localized proctosigmoiditis and other benign causes of bleeding can correlate with the history of bright red post-defecatory bleeding in the absence of significant change in bowel habit, constitutional symptoms and in the absence of a positive family history of colorectal neoplasia [1]. What is evident is that flexible sigmoidoscopy will be safe and specific for the exclusion of colorectal neoplasia in low risk patients presenting with a particular type of rectal bleeding where there is an identifiable anal cause on direct examination [2].

We have known for years about the average performance time, feasibility and completeness of flexible sigmoidoscopy, [3] however, the critical thing when a programme of deliberate flexible sigmoidoscopy is to be used as a screening and management tool is the predictability in patients with designated low-risk rectal bleeding of the likelihood that serious pathology will be missed by this limited examination. This is more likely in male patients over the age of 40 years even in the absence of worrisome symptoms [4-6] where the detection of adenomatous polyps would be critical for the use of full colonoscopy and provide an advantage in screened populations for reducing the overall incidence of colorectal cancer in polypectomized cohorts [7-9]. In this context, certain pathological features, most notably, nuclear polymorphism and crowding rather than mitotic activity show prognostic value for the prediction of metachronous colorectal cancer in screened populations who already have a recto-sigmoid adenoma defining those patients best served by postpolypectomy surveillance [10] where the utilization of new endoscopic-guided imaging modalities define at-risk polyps in patients where these are detected by limited endoscopy [11]. These newer approaches even when endoscopic screening is limited will have implications for polypectomy and full colonic evaluation [12] as too will first-up less invasive screening modalities which will direct either flexible sigmoidoscopy or colonoscopy [13, 14].

The authors have clearly shown gender differences in the logistic performance of flexible sigmoidoscopy which may assist them in their endoscopic list calculations; a fact which is in keeping with the reported differences in the utilization of screening modalities between men and women where the take-up rate of flexible sigmoidoscopy is generally greater in males [15]. These issues are of administrative importance, but one issue is the ability to predict those patients more likely to have positive colorectal screening which will affect the detection of higher-risk adenomatous polyps and earlier cancers where it has been shown that non-sigmoidoscopy screening influences the detection of cancers in distal as well as proximal locations [16]. We don't as yet know what impact the newer modalities of screening will have on the importance of limited endoscopic techniques in open access units or whether we will be able to identify population-based subgroups where such a limited endoscopic approach will prove most cost-effective [17-19]. The decisions made here will have endoscopic durability where demographic risk factors can be identified, (although there is cohort selection bias), for population-based repeat take-up rates of endoscopy in those who have already undergone prior screening procedures [20]. In this respect, the predictability of colorectal adenomas increases with age (particularly in males) although this effect is lost a little as patients exceed 70 years of age [21]. The same effects are seen in younger female patients with high BMI values [22].

This view, however, should be accompanied with a recognized rate of incomplete examination for flexible sigmoidoscopy where this is employed as the principal preliminary examination; a finding more likely in older patients, females and those with a prior history of hysterectomy [23] where there is an overall reported shorter depth of instrument insertion in women which is somewhat independent of the type of endoscopist (medical versus nurse practitioner) used [24, 25]. The secondary derivative costs imposed by flexible sigmoidoscopy must be considered where this technique is used as a primary modality where we know that the relative risk (RR) for the detection of distal colorectal cancer is lower amongst those who have a negative flexible sigmoidoscopy but where the RR for proximal colonic cancer is not different in the negative flexible sigmoidoscopy population when compared with the initially unscreened cohort during follow-up [26]. It must be remembered that the benefits of flexible sigmoidoscopy can be outweighed by secondary resultant costs where demographic disease predictability and flexible sigmoidoscopic accuracy will define its value as a principal investigative modality independently of its gender-related time and turn-over advantages reported here by Chand, Andrews and Nash.

References

- [1] Toomey P, Asimakopoulos G, Zbar A, Kmiot W. 'One-stop' rectal bleeding clinics without routine flexible sigmoidoscopy are unsafe. *Ann R Coll Surg Engl* 1998; 80: 131-3.
- [2] Mehanna D, Platell C. Investigating chronic, bright red rectal bleeding. *Aust N Z J Surg* 2001; 71: 720-2.
- [3] Vellacott KD, Hardcastle JD. An evaluation of flexible fiberoptic sigmoidoscopy. *Br Med J (Clin Res Ed)* 1981; 283(6306): 1583-6.

- [4] Vening W, Willigendael EM, Tjeertes EK, Hulswé KW, Hoofwijk AG. Timing and necessity of a flexible sigmoidoscopy in patients with symptoms suggestive of haemorrhoids. *Colorectal Dis* 2008 [Epub ahead of print].
- [5] Rex DK. Determining indications for primary colonoscopy: how can we predict the need for polypectomy? *Am J Gastroenterol* 1993; 88: 1179-83.
- [6] Rex DK, Lehman GA, Ulbright TM, *et al.* Colonic neoplasia in asymptomatic persons with negative fecal occult blood tests: influence of age, gender and family history. *Am J Gastroenterol* 1993; 88: 801-2.
- [7] Atkin WS, Morson BC, Cuzick J. Long-term risk of colorectal cancer after excision of rectosigmoid adenomas. *N Engl J Med* 1992; 326: 700-2.
- [8] Winawer SJ, Zauber AG, Ho MN, *et al.* Prevention of colorectal cancer by colonoscopic polypectomy. The National Polyp Study Workgroup. *N Engl J Med* 1993; 329: 1977-81.
- [9] Winawer SJ, Zauber AG, Fletcher RH, *et al.* Guidelines for colonoscopy surveillance after polypectomy: a consensus update by the US Multi-Society Task Force on colorectal cancer and the American Cancer Society. *CA Cancer J Clin* 2006; 56: 143-59.
- [10] Meijer GA, Baak J, Talbot IC, Atkin WS, Meuwissen SG. Predicting the risk of metachronous colorectal cancer in patients with rectosigmoid adenoma using quantitative pathological features. A case-control study. *J Pathol* 1998; 184: 63-70.
- [11] Van den Broek FJ, Fockens P, Van Eeden S, *et al.* Clinical evaluation of endoscopic trimodal imaging for the detection and differentiation of colonic polyps. *Clin Gastroenterol Hepatol* 2009; 7: 288-95.
- [12] Kaltenbach T, Friedland S, Soetikno R. A randomised tandem colonoscopy trial of narrow band imaging versus white light examination to compare neoplasia miss rates. *Gut* 2008; 57: 1406-12.
- [13] Van Gils P, van den Berg M, van Kranen H, de Wit AG. A literature review of assumptions on test characteristics and adherence in economic evaluations of colonoscopy and CT-colonography screening. *Eur J Cancer* 2009 [Epub ahead of print].
- [14] White TJ, Avery GR, Kennan N, Syed AM, Hartley JE, Monson JR. Virtual colonoscopy vs conventional colonoscopy in patients at high risk of colorectal cancer – a prospective trial of 150 patients. *Colorectal Dis* 2009; 11: 138-45.
- [15] Wardle J, Miles A, Atkin W. Gender differences in utilization of colorectal cancer screening. *J Med Screen* 2005; 12: 20-7.
- [16] Slattery ML, Kinney AY, Levin TR. Factors associated with colorectal cancer screening in a population-based study: the impact of gender, health care source and time. *Prev Med* 2004; 38: 276-83.
- [17] Vijan S, Hwang EW, Hofer TP, Hayward RA. Which colon cancer screening test? A comparison of costs, effectiveness and compliance. *Am J Med* 2001; 111: 593-601.
- [18] Segnan N, Senore C, Andreoni B, *et al.* Baseline findings of the Italian multicenter randomized controlled trial of “once-only sigmoidoscopy” – SCORE. *J Natl Cancer Inst* 2002; 94: 1763-72.
- [19] Allen E, Nicolaidis C, Helfand M. The evaluation of rectal bleeding in adults. A cost-effectiveness analysis comparing four diagnostic strategies. *J Gen Intern Med* 2005; 20: 81-90.
- [20] Imperiale TF, Kahi CJ, Stuart JS, *et al.* Risk factors for advanced colorectal neoplasia in persons younger than age 50. *Cancer Detect Prev* 2008; 32: 33-8.
- [21] Gölder S, Vogt W, Lichti H, *et al.* Acceptance of flexible sigmoidoscopy as a screening examination for colorectal cancer in an outpatient clinic. *Int J Colorectal Dis* 2007; 22: 387-94.
- [22] Kim SE, Shim KN, Jung SA, Yoo K, Moon IH. An association between obesity and the prevalence of colonic adenoma according to age and gender. *J Gastroenterol* 2007; 42: 616-23.
- [23] Ramakrishnan K, Scheid DC. Predictors of incomplete sigmoidoscopy. *J Am Board Fam Pract* 2003; 16: 478-84.
- [24] Eloubeidi MA, Wallace MB, Desmond R, Farraye FA. Female gender and other factors predictive of limited screening flexible sigmoidoscopy examination for colorectal cancer. *Am J Gastroenterol* 2003; 98: 1634-9.
- [25] Viiala CH, Olynyk JK. Outcomes for women in a flexible sigmoidoscopy-based colorectal cancer screening program. *Intern Med J* 2008; 38: 90-4.
- [26] Rabeneck L, Lewis JD, Paszat LF, Saskin R, Stukel TA. Risk of proximal and distal colorectal cancer following flexible sigmoidoscopy: a population-based cohort study. *Am J Gastroenterol* 2008; 103: 2075-82.

Andrew P. Zbar MD (Lond)
MBBS FRCS (Ed) FRCS (Gen) FRACS

Adjunct Professor
University of New England New South Wales Australia
Editor-in-Chief Open Colorectal Cancer Journal

Received: March 7, 2009

Revised: March 7, 2009

Accepted: April 13, 2009

© Andrew P. Zbar; Licensee *Bentham Open*.

This is an open access article licensed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0/>) which permits unrestricted, non-commercial use, distribution and reproduction in any medium, provided the work is properly cited.