



Letter to the Editor

Controversies in patient selection; is the colonic perforation after colonoscopy well-known?

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Dear Editor,

Ageing of populations and concern about malignant lower gastrointestinal diseases increased referrals for colonoscopy. Our concern here is to express the risk factors for colonic perforation (CP) which is known to be the most serious complication of colonoscopy and the doubt for patient selection. Colonoscopy is the best method for detecting the colon cancer and precursor lesions of colon cancer such as polyps. As the number rates vary from 0.08% to 0.14% for diagnostic colonoscopies. For therapeutic colonoscopies perforation may be seen up to 5% (1). Mechanical force is the most important culprit of CP after diagnostic colonoscopy while perforation due to polypectomy is the most common complication of therapeutic colonoscopy. Rectosigmoid junction and sigmoid colon are the most susceptible sites for CP because of mobility and sharp angulation of sigmoid colon. Forceful insertion of colonoscope's tip at rectosigmoid junction or shearing stress applied by the shaft due to overextension of colon while forming a sigmoid loop are the reasons of CP at the anti-mesenteric region. Barotrauma is mainly the cause of perforation at caecum due to insufflation with excessive air. Intraabdominal adhesions following previous operations or pelvic inflammatory disease, inflammation of sigmoid colon due to diverticulitis by thinning and making the bowel wall fragile compromises CPs. Old age and female gender are among the risk factors of CP. In patients older than 75 years of age CP rates are 5-6 times more than the younger population. Sharp angulation of the rectosigmoid junction make female gender more susceptible to the colonic perforation than men. Also the length of the colon is more in females enabling loop formation and CP (2). Inflammatory bowel diseases, colonic obstruction due to tumors, corticosteroid use are among the other risk factors of CP. Polypectomy of polyps larger than 2 cm increase the risk of perforation after therapeutic colonoscopy. Also stenting of tumoral lesions or strictures caused by inflammatory diseases increase the risk of perforation (3). Most of these risk factors are patient-related. However, the most important endoscopist-related factor is endoscopy experience. Indeed, in a recently published retrospective study of 74,486 colonoscopy cases,

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it was emphasized that endoscopist experience is an important risk factor for CP. It was reported that 16 (84%) of the 19 CPs in the study occurred during the endoscopists' first 1,000 endoscopic experiences (4). This complication of colonoscopy may be devastating and lethal. Therefore patient selection becomes very important. Stigmata for colon cancer may be diverse such as anemia, hemorrhage, abdominal pain, weight loss and positive gaita test for blood. Early detection and removal of polyps can protect the patient from colon cancer and possible chemotherapy harms, but because it is an invasive procedure, the risk of perforation is higher than with diagnostic colonoscopy. Also diagnosis and follow up of inflammatory bowel diseases is an other dilemma in patient selection. Low sensitivity of the tests such as gaita and diagnostic variables prevents right patient selection. Many patient is unaware of the procedure and its complications. Awareness of patients and ideal patient selection may make the procedure safer.

In conclusion, since CP is a serious complication, physicians should pay attention to the ideal patient selection for colonoscopy and avoid unnecessary colonoscopy. Considering the risk factors mentioned above, it would be beneficial to have the procedure performed by an experienced endoscopist, especially in high-risk patients. In addition, the low sensitivity of current blood and stool tests leads to more patients being referred for colonoscopy. Later new diagnostic tests may change the era and prevent colonoscopies and its complications for healthy patients.

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