

Colorectal cancer screening using immunochemical fecal occult blood test

ABSTRACT

Fecal occult blood test (FOBT) screening has been shown to decrease the incidence and mortality of colorectal cancer (CRC). The sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) of the immunochemical fecal occult blood test (i-FOBT) in diagnosing CRC were assessed among the patients in a tertiary referral hospital in Malaysia. A total sample of 814 patients aged 16 to 85 years old who performed i-FOBT and endoscopic screenings was obtained. The patients were recruited for a retrospective investigation. Sensitivity, specificity, PPV, and NPV were derived for the CRC screenees. Out of the 814 patients screened using i-FOBT, half of them were above 59 years old (49.6%), and 36% had positive i-FOBT. Gender distribution was almost equal, where 53.4% of the patients were female, and 46.6% were male. Majority of the patients were Malays (56.6%), followed by Chinese (24.0%), Indians (16.5%), and others (2.9%). Among the 71 patients referred for colonoscopy, 57.7% and 42.3% corresponded to positive and negative i-FOBT cases, respectively. Polyps were found to be most common among the patients (25.6%), 7.0% were found positive for invasive CRC, and 35.2% had normal colonoscopic findings. There was a significant association between colonoscopic finding and positive i-FOBT ($p=0.001$). The sensitivity, specificity, PPV, and NPV for CRC detection were 66.7%, 43.0%, 9.8%, and 93.3%, respectively. The results indicate that i-FOBT is a useful tool in the detection of abnormalities in the lower gastrointestinal tract and therefore serves as a cornerstone for potential large-scale screening programmes.

Keyword: Colorectal cancer; Screening; Immunochemical fecal occult blood test