COLORECTAL CANCER SCREENING USING COLONOSCOPY AND ECONOMIC EVALUATION

Executive Summary

[Adapted from the report by Madam Ku Nurhasni Ku Abd Rahim]

Review Group Membership

MaHTAS Reviewer:
Madam Ku Nurhasni Ku Abd Rahim
Madam Noormah Mohd Darus
Dr. Junainah Sabirin

External Reviewer:
Dr. Gerard Lim Chin Chye
Dr Hjh Rosaida bt. Hj Mohd Said
Professor Dr. Sharifah Ezat Wan Puteh
Assoc Professor Dr. Asrul Akmal Shafie

Disclaimer:
Technology review is a brief report, prepared on an urgent basis, which draws on restricted reviews from analysis of pertinent literature, on expert opinion and / or regulatory status where appropriate. It is subjected to an external review process. While effort has been made to do so, this document may not fully reflect all scientific research available. Additionally, other relevant scientific findings may have been reported since completion of this review.

For further information please contact:

Health Technology Assessment Section (MaHTAS)
Medical Development Division
Ministry of Health Malaysia
Level 4, Block E1, Precinct 1
Government Office Complex
62590 Putrajaya.

Tel: 603 8883 1229

Fax: 603 8883 1230

Available at the following website:
http://www.moh.gov.my

2016

Introduction

Colorectal cancer is the fourth common cause of cancer death worldwide accounting to 694 000 deaths in 2012. In Malaysia, colorectal cancer is the second and third most common cancer in men and women respectively. The overall incidence rate for colorectal cancer was 21.3 cases per 100, 000 populations in Malaysia and preliminary findings from Malaysian pilot study of colorectal cancer screening using iFOBT showed that 65.2% of colorectal cancer was detected at stage III and IV. It has been suggested that screening for colorectal cancer may results in reduction of CRC incidence and related mortality through early detection of colorectal cancer. Among several options available are immunochemical faecal occult blood test (iFOBT), flexible sigmoidoscopy (FS), colonoscopy and computed tomographic colonography (CTC).Colonoscopy has been frequently quoted as the preferred screening method for colorectal cancer screening in several guidelines. This technology review was conducted in order to estimate the cost-effectiveness of colorectal cancer screening using colonoscopy.

Objective/Aim

The aim of this review and economic evaluation is to assess the safety, efficacy/effectiveness and cost-effectiveness of screening asymptomatic population aged 50 to 65 years old for colorectal cancer using colonoscopy. The economic evaluation estimated the cost effectiveness of colorectal cancer screening using colonoscopy or iFOBT+colonoscopy compared with no screening. Economic implication will also be estimated based on the costs derived from the cost-effectiveness analysis.

Results and Conclusions

14 articles retrieved from the electronic scientific databases which consist of 1 systematic review with meta-analysis, 2 systematic review, 1 randomised controlled trial and 10 observational studies to demonstrate the safety and efficacy/effectiveness of screening for colorectal cancer using colonoscopy. In addition, three systematic review of cost-effectiveness analysis and one cost utility analysis were also retrieved from the electronic scientific databases. There were fair to good level of evidence to suggest the efficacy/effectiveness of colonoscopy as a population based screening modalities. Evidence showed that screening of colorectal cancer using colonoscopy was able to detect lesion and colorectal cancer and subsequently reduce the colorectal cancer incidence and mortality. Limited good level of evidence also showed that there were few serious adverse events that have been reported such as perforation and major bleeding. iFOBT+colonoscopy shown to be the cost effective screening strategy compared with no screening or colonoscopy with an estimated ICER of RM9,377.65.

Methods

Systematic electronic scientific databases search were conducted using OVID interface; Ovid MEDLINE® In-process and Other Non-indexed citations and Ovid MEDLINE® 1946 to present, All EBM Reviews: Cochrane Database of Systematic Reviews 2005 to June 2016, EBM Reviews ACP Journal Club 1991 to May 2016, EBM Reviews - Database of Abstracts of Reviews of Effects 1st Quarter 2016, EBM Reviews - Cochrane Central Register of Controlled Trials May 2016, EBM Reviews - Cochrane Methodology Register 3rd Quarter 2012, EBM Reviews - Health Technology Assessment 2nd Quarter 2016, EBM Reviews - NHS Economic Evaluation Database 1st Quarter 2016 and EMBASE