



Original Article

# Fecal occult blood test and flexible rectosigmoidoscopy: tools for the screening of colorectal neoplasms in asymptomatic patients<sup>☆</sup>

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ABSTRACT

**Purpose:** To assess the feasibility and effectiveness of the fecal occult blood test (FOBT) and flexible rectosigmoidoscopy (RSS), as tools used in the CRC screening, in asymptomatic patients, from 50 years of age.

**Methods:** The study is transversal and presents a sample of 102 individuals. The FOBT used was the guaiaco, FECA-CULT® method, held at a single time, in feces collected from a complete evacuation. Individuals, who presented the positive FOBT, were sent to colonoscopy complement, although this is not primary variable examined in this study. All subjects underwent to flexible RSS, after bowel preparation, using a solution of sodium phosphate monobasic monohydrate and dibasic sodium phosphate heptahydrate.

**Results:** Individuals showed minimum age of 50 years and maximum 82 years, 61.6 years average and standard deviation +8.1. Of the 102 individuals, 42 (41%) belong to the males, whereas 60 (58.8%) female. The FOBT presented 10 positive cases (9.8%) (IC 95%: 4.8–17.3%) and 92 negative cases (90.2%) (IC 95%; 82.7–95.2%). The FOBT was effective at 2.9% and presented false-positive result in 6.9%. The result of the FBOT association with flexible RSS showed that 70% of neoplastic polyps showed no bleeding. Its sensitivity was 30% (IC 95%: 0.00–63.40%), the value of the relative risk was 3.94 (IC 95%: 1.20–12.89) and 5.20 valued odds ratio (IC 95%: –23.15 to 1.21). The specificity was 92.40% (IC 95%: 86.43–98.35%). The flexible RSS detected 15 polyps, among which, after histopathological study, 10 were neoplastic, being 09 adenomatous polyps (60%) and 01 malignity (6.7%) (IC 95%: 0.20–31.90%) and 05 non-neoplastic polyps (33.3%), and 03 inflammatory polyps (20%) (IC 95%: 4.3–48.1%) and 02 hyperplastic polyps (13.3%) (IC 95%: 1.7–40.5%). Neoplastic polyps were present in 60% of individuals over 60 years of age. Among the adenomatous polyps, the adenomatous polyp tubular prevalence is 53.33%. Among the 102 individuals, flexible RSS detected 09 adenomatous polyps (8.82%) and 01 (0.98%) malignity polyp.

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**Conclusion:** The tools FOBT and flexible RSS presented feasibility and, when associated demonstrated statistical significance in detecting polyps in general and important clinical significance on the detection of adenomatous polyps and colorectal cancer.

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## Teste de sangue oculto nas fezes e retossigmoidoscopia flexível: instrumentos para o rastreamento de neoplasias colorretais em pacientes assintomáticos

### R E S U M O

**Palavras-chave:**  
Neoplasias colorretais  
Diagnóstico  
Sangue oculto

**Objetivo:** Avaliar a viabilidade e eficácia do teste de sangue oculto nas fezes (TSOF) e retossigmoidoscopia (RSS) flexível, como instrumentos utilizados na triagem do CCR, em pacientes assintomáticos a partir dos 50 anos.

**Métodos:** Esse é um estudo transversal e apresenta uma amostra de 102 indivíduos. O TSOF utilizado foi o método do guaiaco FECA-CULT®, realizado em uma única vez, em fezes cole-tadas de uma evacuação completa. Indivíduos com TSOF positivo foram encaminhados para o complemento de colonoscopia, embora essa não seja a variável primária examinada neste estudo. Todos os pacientes foram submetidos a uma RSS flexível, após a preparação do intestino com o uso de uma solução de fosfato de sódio monobásico mono-hidratado e de fosfato de sódio dibásico hepta-hidratado.

**Resultados:** Os participantes tinham idade mínima de 50 anos e máxima de 82 anos ( $\text{média} \pm \text{desvio padrão}$ ,  $61,6 \pm 8,1$  anos). Dos 102 pacientes, 42 (41%) eram homens, enquanto 60 (58,8%) eram mulheres. O TSOF revelou 10 casos positivos (9,8%) (IC 95%: 4,8-17,3%) e 92 casos negativos (90,2%) (IC 95%: 82,7-95,2%). O TSOF foi eficaz em 2,9% e apresentou resultado falso-positivo em 6,9%. O resultado da associação de TSOF com RSS flexível demonstrou que 70% dos pólipos neoplásicos não exibiam qualquer sangramento. Sua sensibilidade foi de 30% (IC 95%: 0,00-63,40%), com risco relativo de 3,94 (IC 95%: 1,20-12,89) e razão de sensibilidade (odds ratio) de 5,20 (IC 95%: 1,21-23,15). A especificidade da associação foi de 92,40% (IC 95%: 86,43-98,35%). A RSS flexível detectou 15 pólipos, tendo sido contatado que, depois do estudo histopatológico, 10 eram neoplásicos: 9 pólipos adenomatosos (60%) e 1 malignidade (6,7%) (IC 95%: 0,20-31,90%). Além disso, a RSS flexível detectou 5 pólipos não neoplásicos (33,3%): 3 pólipos inflamatórios (20%) (IC 95%: 4,3-48,1%) e 2 pólipos hiperplásicos (13,3%) (IC 95%: 1,7%-40,5%). Os pólipos neoplásicos estavam presentes em 60% dos pacientes com mais de 60 anos de idade. Entre os pólipos adenomatosos, houve prevalência tubular de pólipos adenomatosos em 53,33%. Entre os 102 indivíduos, a RSS flexível detectou 9 pólipos adenomatosos (8,82%) e 1 (0,98%) pólipo maligno.

**Conclusão:** Foi constatada a viabilidade dos instrumentos TSOF e RSS flexível; quando associados, demonstraram significância estatística na detecção de pólipos em geral e importante significado clínico para a detecção de pólipos adenomatosos e do câncer colorretal.

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## Introduction

Colorectal cancer (CRC) remains the second most common cause of cancer mortality in the United States and the fourth in Brazil, with incidence and mortality equal to both genders. Although tracing reduce mortality, by removing the cancer in initial stage and the cancer precursor lesions, known as adenomatous polyps, the preventive procedures are very scarce, because of doctors, patients and health system resistance.<sup>1</sup>

The CRC is the third most common cancer in the world and the mortality rate has been kept the same, over the

past fifty years.<sup>2</sup> Tracing means using simple tests that can be applied to the population at risk for developing the disease, even asymptomatic, in order to be diagnosed precursor lesion of CRC or even cancer, in initial stage. The natural evolution of the adenomatous polyp to the adenocarcinoma is recognized. However, the sequence since the emergence of adenoma, growth to malignization lasts about 10 years, favorable time for the risk population to undergo the CRC screening and reduce the mortality rate by CRC, in relation to a population control, not subjected to the screening.<sup>3,4</sup>

The CRC screening is justified by the high incidence of the CRC and by the opportunity to make the diagnosis of

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