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EDITORIAL

Barriers to colorectal cancer screening in the developing world: The view from Pakistan

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Abstract

Colorectal cancer screening has become a defining concern of current gastroenterological practice in many Western nations. This same focus does not exist in many developing countries, including Pakistan. There is a need to develop a model for the developing world. Here are several areas that need to be pursued: (1) epidemiological research; (2) physician and public education; (3) training of gastroenterologists, especially female ones; (4) less expensive and more culturally acceptable screening options (fecal occult blood testing); and (5) cost-effectiveness analyses. Gastroenterologists in developing countries need to step up to educate people and promote, where possible and in keeping with local conditions, the prevention and early diagnosis of colorectal cancer.

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Key words: Colon cancer; Cancer screening; Pakistan; Cancer

Core tip: Gastroenterologists in developing countries need to step up to educate people and promote, where possible and in keeping with local conditions, the prevention and early diagnosis of colorectal cancer.

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INTRODUCTION

Colorectal cancer screening has become a defining concern of current gastroenterological practice in many Western nations. This same focus does not exist in many developing countries, including Pakistan.

LACK OF EPIDEMIOLOGICAL DATA

A basic prerequisite for any screening program is knowledge of the incidence and prevalence of the disease in question. In the absence of this information any screening process is unjustifiable. Until as recently as last year, there was no useful incidence data on colorectal cancer in Pakistan. Recently a study has shown that Pakistan falls into a low incidence region/category for colorectal cancer[1]. The crude incidence rate is 3.2% in both males and females. Most significantly, however, the incidence appears to be rising, particularly in males. This study also suggested that given an aging population, a strong tradition of consanguineous marriages, and a high prevalence of colorectal cancer risk factors, including a trend towards a more "westernized" dietary intake, this low incidence may, in fact, be an artifact. This data may also be an underestimation of colorectal cancer in Pakistan because the registry is voluntary and some cases may have gone unreported.

FINANCIAL LIMITATIONS

Implementation of Western models of large scale colonoscopic screening programs would place an insurmountable burden on already struggling health care systems in many developing countries. As a reflection of the state of healthcare in Pakistan, data on life expectancy

Table 1 Life expectancy, healthcare expenditure per capita in Pakistan compared with other countries

Country	Life expectancy (M/F, yr)	Expenditure on health per capita ($, 2011)
Pakistan	66/68	69
India	64/67	141
Bangladesh	69/70	67
Sri Lanka	71/78	191
Singapore	80/85	2787
United Kingdom	79/82	3322
United States	76/81	8608

Available from: URL: http://www.who.int/countries/, accessed on May 16, 2013.

and healthcare expenditure per capita are given in Table 1. In Pakistan there is no health insurance system and the burden of any investigation rests solely with the patient. Given that the average annual income in Pakistan is $650, the cost of different screening options is of paramount consideration. A colonoscopy costs $100 here and fecal occult blood testing costs $1.30. Regardless, it is still cheaper to diagnose colorectal cancer early than treat advanced malignancies.

LACK OF RESOURCES

Even if money to support a large scale colorectal cancer screening process were to be suddenly available, many trained gastroenterologists would be required which are already in short supply in many developing countries. In Pakistan, a country of 180 million people, there are limited number of gastroenterologists and endoscopy units and these are mostly concentrated in urban areas leaving the majority of the population without any access to gastroenterologic facilities.

LACK OF PHYSICIAN AND PUBLIC AWARENESS

There is a great lack of awareness about many malignancies, including colorectal cancer, in Pakistan. Even amongst physicians, there is a lack of awareness about the symptoms of colorectal cancer. For example, many physicians do not know that the presence of blood in the stool, especially in someone older than 50, needs to be investigated further and can't simply be attributed to hemorrhoids and ignored. Risk factors for colorectal cancer need to be highlighted, in particular the genetic aspects of colorectal cancer risk. First degree relatives of patients with colon cancer are rarely told that they are at increased risk for developing this malignancy and, therefore, need to be screened appropriately. Beyond this, the concept of screening asymptomatic persons, at average risk for colorectal cancer needs to be introduced and promoted here.

CULTURAL BARRIERS

There are many cultural barriers that exist in Pakistan and would impede the implementation of a colon cancer screening program. Patients are wary of talking about even the possibility of cancer, there is widespread fear of endoscopic procedures due to concerns about potential complications and rumors of excruciating procedure-induced pain, and there is a widespread misconception that biopsying a malignant lesion invariably leads to spread of cancer. Finally, with Pakistan being a conservative Muslim country, female patients here are reluctant to have colonoscopy exams performed by male doctors and in this country of 180 million people, there are only a handful of female gastroenterologists.

The Asia Pacific consensus recommendations for colorectal cancer have focused primarily on data from East and Southeast Asia and have overlooked the Indian Subcontinent (Pakistan, India, Bangladesh) which together comprise more than one billion people[2]. A prospective multinational colonoscopy screening study found that the prevalence of advanced colorectal neoplasms in asymptomatic Asians is comparable to that in the West[3]. Again, the Indian Subcontinent was under-represented. Finally, cost-effective analyses conducted in other parts of the world are not necessarily directly applicable to our setting.

For all the reasons mentioned above, the implementation of more well-established cancer screening protocols (for breast cancer, cervical cancer, prostate cancer) have also not yet occurred in Pakistan. Is colon cancer screening a luxury of developed nations, unaffordable in the developing world? There are possible solutions to these obstacles. There is a need to develop a model for the developing world. Here are several areas that need to be pursued: (1) epidemiological research; (2) physician and public education; (3) training of gastroenterologists, especially female ones; (4) less expensive and more culturally acceptable screening options (fecal occult blood testing); and (5) cost-effectiveness analyses.

In a country beset by terrorism, militancy, and political uncertainty, it is easy to lose sight of issues relating to cancer screening. The initiation and implementation of any large-scale cancer screening program requires careful thought. Before starting a colon cancer screening program in Pakistan, efforts must be made to increase physician and public awareness regarding colon cancer, in particular, and the philosophy behind cancer screening, in general. Gastroenterologists in Pakistan and other developing countries need to step up to educate people and promote, where possible and in keeping with local conditions, the prevention and early diagnosis of colorectal cancer.

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