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Rectal bleeding and implications for surgical care in Nepal

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ABSTRACT

Background: Because rectal bleeding is a cardinal symptom of many colorectal diseases including colorectal cancers, its presence alone could give insight into the prevalence of these conditions where direct population screening is lacking. In South Asia, which is home to over one fifth of the world's population, there is paucity of epidemiologic data on colorectal diseases, particularly in the lower-income countries such as Nepal. The aim of this study was to enumerate the prevalence of rectal bleeding in Nepal and increase understanding of colorectal diseases as a health problem in the South Asian region.
Methods: A countrywide survey using the Surgeons OverSeas Assessment of Surgical Need tool was administered from May 25–June 12, 2014 in 15 of the 75 districts of Nepal, randomly selected proportional to population. In each district, three Village Development Committees were selected randomly, two rural and one urban based on the Demographic Health Survey methodology. Individuals were interviewed to determine the period and point prevalence of rectal bleeding and patterns of health-seeking behavior related to surgical care for this problem. Individuals aged >18 y were included in this analysis.
Results: A total of 1350 households and 2695 individuals were surveyed with a 97% response rate. Thirty-eight individuals (55% male) of the 1941 individuals ≥18 y stated they had experienced rectal bleeding (2.0%, 95% confidence interval 1.4%–2.7%), with a mean age of 45.5 (standard deviation 2.2). Of these 38 individuals, 30 stated they currently experience rectal bleeding. Health Care was sought in 18 participants with current rectal bleeding, with two major procedures performed, one an operation for an anal fistula. For those who

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sought health care but did not receive surgical care, reasons included no need (4), not available (6), fear and/or no trust (5), and no money for health care (1). For those with current rectal bleeding who did not seek health care, reasons included no need (1), not available (2), fear and/or no trust (6), and no money for health care (3). Twenty-three individuals had an unmet surgical need secondary to rectal bleeding (1.2%, 95% confidence interval 0.8%–1.8%).

Conclusions: The Nepal health care system at present does not emphasize the importance of surveillance colonoscopies or initial diagnostics by a primary care physician for rectal bleeding. Our data demonstrate limited access for patients to undergo evaluation of rectal bleeding by a health care professional and that potentially there are people in Nepal with rectal bleeding that may have undiagnosed colorectal cancer. Further advocacy for preventative medicine and easier access to surgical care in lower-income countries is crucial to avoid emergency surgeries, advanced stage malignancies, or fatalities from treatable conditions.

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1. Background

Inadequate access to comprehensive surgical care for communities in low- and middle-income countries (LMICs) has emerged as a global health priority [1–4]. Surgical disease has been defined by pathology for which an invasive procedure is required for treatment, palliation, or cure [4]. Some surgical diseases present with trigger signs or symptoms that require further investigation and may ultimately lead to a surgical therapy. A breast mass, atypical cervical examination, or rectal bleeding are examples of these types of presenting scenarios. This definition is critically important for policy makers working to understand the burden of surgical disease and develop systems that are capable of successfully evaluating and treating surgical patients. The breadth of this definition is extensive and can be a challenging feature when considering resource allocation and cost-effectiveness. The World Health Organization (WHO) has characterized a subgroup of surgical interventions as Emergency and Essential Surgery (EES) that reduces disability or saves lives [5]. Advocates for EES have described strategies for moving these services closer to the forefront of the complex political economy of global health policy. The resources allocated to EES belie the data showing that improvements in surgical care at district hospitals are cost-effective public health interventions [6,7]. This is evidence of the unfortunate designation of surgical care as the “neglected step-child” of global health. Much of these data, however, apply to high-acuity surgical disease. The data describing the burden of subacute surgical conditions and the cost-effectiveness of treatment in LMICs are currently lacking.

Malignant and benign diseases of the colon, rectum, and anus encompass a vast spectrum of disorders that can affect the quality of life and reduce overall survival. The standard of care for evaluation and management of colorectal diseases requires the full breadth of diagnostic and therapeutic options, often requiring a surgical provider and/or intervention. The presence of colorectal bleeding significantly raises suspicion for pathology of the lower gastrointestinal tract and may be a heralding sign of a surgical disease.

Population-based data on such surgical pathologies are lacking in LMICs. To address this need, Surgeons OverSeas, a nongovernmental organization, created the Surgeons OverSeas Assessment of Surgical Need (SOSAS) survey tool to obtain population-level data for general surgical needs specifically in LMICs. To date, the SOSAS survey has been executed in Rwanda and Sierra Leone (*Petroze, Surgery 2012, Groen RS 2012 Lancet*). Data from countries outside of sub-Saharan Africa are lacking. Thus, the objective of this study was to provide epidemiologic data at a population-based level of rectal bleeding using the SOSAS survey tool in Nepal, a low-income country in South Asia.

2. Methods

2.1. *Setting*

The Federal Democratic Republic of Nepal is a South Asian country with a population of just over 27 million people. Bordered between the People’s Republic of China on the north and the Republic of India on the south, west, and east, Nepal is a landlocked nation caught between two global economic, social, and political powerhouses that are at the center of a globalizing Asia and South Asia. In the 2000 WHO report comparing health systems, Nepal ranks 150 of 191 member nations of the WHO. The per capita expenditure on health in Nepal compared with that of the WHO regional average for Southeast Asia is consistently lower. This gap is also widening, possibly because of globalizing forces in the region. In 2012, the regional average for per capita total expenditure on health was US$70, whereas in Nepal was around US$35 [8].

The Nepalese gross national income per capita in 2013 was US$730 and roughly 25% of the population was at or below the national poverty line [9]. Nepal, though a low-income country, has implemented health system improvements over the last decade to improve access to care and essential medicines. Since 2006, increasing numbers of essential medicines have been made available free of charge at government-run care delivery sites. Government subsidies are available for certain cancers, heart disease, and kidney disease, and there are incentive programs to encourage pregnant women to deliver at health-care facilities. Pilot programs of community-based health insurance exist in six districts of Nepal; however, the coverage is still sparse and there are no other options for public insurance programs. This leaves most people with high out-of-pocket expenses for most health-care needs [10].

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