

Cancer Presentation in a Developing Nation: The 3:1 Ratio

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Introduction

Phase I delays have been documented to be common in developing countries, including Sub-Saharan Africa (SSA [1-3]. A phase I delay is that caused by the patient's reluctance to seek medical attention [4]. Late presentation is the order of the day in Sub-Saharan Africa for a multitude of pathologies [5-7], with phase I delays being implicated in a substantial number of articles [8-11]. The outcome of many diseases is a function of the delay in presentation [5]. Phase I delays in general, worsen disease outcomes.

Patient reluctance is not always responsible for delayed presentation. Not receiving the appropriate care for the pathology after presentation would constitute a delay, but in this case, a phase III delay which is one attributed to the health practitioner [4].

The following cases illustrate instances of phase III delays in our environment.

Case Presentations

Mr X is a 51 year old man who presented with a two month history of recurrent colicky right iliac fossa pain. He presented to a health facility where a diagnosis of appendicitis was made, and an appendectomy was said to have been done. Four months post-operatively, there was a progressive right lower quadrant abdominal mass and weight loss. He then presented to a tertiary health centre. A 15 × 18 cm mass in the right lumbar region extending to the iliac fossa was found. A diagnosis of a right colonic tumour was made for which he had a right hemicolectomy. Intra-operative findings were peritoneal seedlings and para-aortic lymphadenopathy. There was no ascites or gross hepatic deposit. To our surprise, the appendix was still found in situ. It is uncertain what was done at the initial surgery, or what the findings were, but this patient was given no further counsel or referral post-operatively by the initial healthcare givers.

Mrs. Y, a 53 year old woman, presented with a month's history of epigastric pain and early satiety. A diagnosis of peptic ulcer disease was made at a health facility and proton pump inhibitors with antacids were prescribed without much relief. No upper gastrointestinal endoscopy was done. She felt a left hypochondriac mass 17 months after initiation of the aforementioned treatment. She was then asked to have an ultrasound scan done and referred to a tertiary facility. There was a mobile mass in the left hypochondrium which one could get above, measuring 12 × 13 cm in its widest dimensions. There was no Virchow's node. A diagnosis of a gastrointestinal stromal tumour involving the stomach was made. An abdominopelvic computerised tomographic scan showed a mass arising from the lesser curvature of the stomach. She had an exploration which revealed an irregular mass in the lesser sac, not attached to the stomach. A mesenteric stromal tumour was the diagnosis.

Mr. Z, a 49 year old man who presented with bleeding per rectum eight months prior, was diagnosed to have haemorrhoids. Xylocaine suppositories, liquid paraffin and Sitz baths were recommended. He became incontinent of faeces, and was referred following a digital rectal finding of a lesion in the anorectum. He had lost weight, developed low back pain and paraparesis. A rectal biopsy yielded adenocarcinoma, and he was counselled for an abdominoperineal resection. Abdominopelvic ultrasonography showed a solitary hepatic metastatic lesion of 2.5 cm in diameter. The serum carcinoembryonic antigen titre was 22.1 ng/ml (normal value: < 5 ng/ml in smokers and < 3 ng/ml in non-smokers). Intra-operative findings were a rectal tumour which spanned from the rectosigmoid junction to the distal third of the rectum.

Discussion

A health care worker has been defined as a person "engaged in actions with the primary intent of enhancing health" – World health report, 2006 [12]. Adams et al. adapted the WHO definition, and defined human resources for health as "the stock of all individuals engaged in the promotion, protection, or improvement of the health of the population" [13]. These were further classified into non-health professionals and health professionals [14,15]. Seeking care, advice or therapy from a higher health authority or body is the patient's perception of "presentation". In SSA, and possibly other developing countries, the patient does not always distinguish between the two broad categories listed by Adams. This "health figure" may be the patent medicine dealer who in addition to sales prescribes drugs; or the traditional medicine practitioner or the cleric. It may be a community health worker or nurse whose job description may not include specialised care (Figure 1). It may also be a doctor who is not a specialist or lacks facilities required to render the necessary care. Whatever the scenario, the patient has indeed presented himself or herself for treatment.

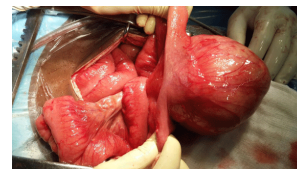


Figure 1: The right hemicolectomy specimen of patient X with the appendix still *in-situ*.

Medical doctors are in short supply in Africa, with an urban preponderance in their distribution [12,14]. These doctors may be general practitioners or specialists of various disciplines. The general

practitioners, although still scarce, are more accessible to the populace than the specialists [15,16].

Nigeria, the most populous nation in West Africa, is a Sub – Saharan nation. Her third (1975 – 1980) and fourth national development plans (1981 – 1985) introduced various cadres of health workers as support staff to improve societal health coverage [17,18]. These health workers bear the status of “doctor” in the society, especially if they are males. Ethiopia, another Sub – Saharan nation, in a similar bid to increase health coverage, introduced health extension workers in 2002 [12]. It was expected that with an effective chain of referral, those requiring specialist care will be promptly directed to the appropriate quarters [12].

Omo – Aghoja et al acknowledged the contributions of phase III delays to adverse morbidity and mortality [19]. They noted an unwillingness of some practitioners to refer patients promptly (seen in 92.4% of their patients with phase III delay). This is an unfortunate scenario as it has been shown that 55.3 % of the populace would first present to private practitioners [20]. Other reasons for phase III delays include inadequate training / re – training of health workers, workforce shortage, lack of facilities / drugs, lack of clinical guidelines, among others [15,21].

Using the positive impact that initiatives which trained health workers on early diagnosis, counselling, modalities of treatment and prompt appropriate referral of HIV/ AIDS patients as a precedent, further emphasis has been placed on the need for healthcare system restructuring to improve cancer outcomes [21]. Devi et al. reiterated the importance of a good healthcare system in reducing the late stage of presentation in developing countries [3]. Further, they demonstrated that healthcare workers can also reduce phase I delays by increasing public awareness [3].

Thaddeus and Maine derived the ‘three model delay’ specifically for maternal mortality in developing countries [4]. The contributions of phase I and II delays (delay in reaching the hospital) were unopposed but the relevance of phase III delays met some degree of controversy [4].

There is no doubt that phase I delay exists in developing countries, including SSA nations. Akande and Owoyemi showed that a large proportion (up to 56.9%) of the populace do not think that medical care is crucial to recovery [20]. This was corroborated by Abdulraheem who, in addition, showed a high level of attrition even after presentation [22]. Patronage of traditional herbalists, home therapies, misguided proclamations of the ills of hospital – based care, poverty, illiteracy, and cultural beliefs are some of the reasons for phase I delays in SSA [7,8,10,20,22,23]. Some reports make reference to the contributions of phase II delays as well [12,20]. However, we should not ignore the contributions of healthcare workers to the delay. “Limited professional insight” has been documented as a major cause of health – related death [24]. In an analysis of the merits and demerits of the Anderson model of delayed presentation in cancer patients, the role of treatment delays was acknowledged as an independent factor capable of compounding pre-existing patient delays [25]. The above case presentations help illustrate such scenarios.

Recommendations

Quality control of those rendering health care to the general populace is advised in our setting. This will ensure that the non – health professional does not exceed his/ her limits intentionally, or

accidentally; and refers patients promptly and appropriately. Continuing education is essential for health practitioners.

The development of algorithms to be followed for various symptom presentations is imperative. These would help alert the healthcare giver to the case that has deviated from the norm and therefore, fallen out of his/her purview. It will also indicate the right investigation for a complaint to rule out more sinister pathologies, before attributing symptomatology to a more benign diagnosis.

Health workers must always remember that delay influences outcome.

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