Limitations in the management of colorectal cancer in sub-Saharan Africa

Author & Presenter: David O. Irabor

Department of Surgery, College of Medicine University of Ibadan, Oyo, Nigeria


Colorectal cancer (CRC) was regarded as a rare disease in native West Africans. It is now accepted as an established disease with a rising incidence. The CRC is now known to be a complex tumour with different aetio-pathological pathways. With all cancers early detection is important if one aims to cure the patient. A summary of the clinical features include: Unexplained ill-health and anaemia in patients with cancer of the caecum and ascending colon; palpable abdominal mass for colon cancer; rectal bleeding and tenesmus for carcinoma of the rectum; palpable mass on digital rectal examination in at least 75% of cases. The current complete management of this disease involves extirpative surgery and adjuvant treatment with a combination of cytotoxic chemotherapy and tailored therapy.

This presentation will look at ways in which seamless management of CRC in this environment is hampered.

The ‘PATIENT’ factor:
1. Ignorance (which leads to unfavourable health-seeking behaviour)
2. Poverty (goes for all developing countries)
3. Gullibility (under which falls religion and alternative treatment)
4. Cultural taboos (which lead to refusal of colostomy-based treatments)
5. Aversion of the sequelae of rectal cancer treatment especially in males where up to 30% of patients are under the age of 40 years.
6. Late presentation (effect of 1–5)

The ‘COUNTRY’ factor:
1. Politics: inadequate budget for health
2. Workers not enough; current brain drain of doctors, major cancer centres are stretched.
3. Infra-structure: There is a glaring lack of any population screening programme, a lack of public enlightenment messages for awareness and only two government centres have functioning radiotherapy machines.
4. Staplers and cytotoxic drugs have to be imported, thus are expensive and out of reach of the common man.

The ‘GENETICS’ factor:
The biology of CRC in the native African is different from that of Caucasians and more aggressive. Carcinomatosis peritonei is frequent. There’s also the emergence of unusual metastases to the lungs and spine, bypassing the liver. A summary of the findings by Nigerian researchers on the molecular biology of native Nigerian CRC showed MSI (Not otherwise stated) occurred in 23–53% of Nigerian CRC, MSI-H seen in 28.1–43%. KRAS in 21% while BRAF was seen in 4.5%. The significance of these results may mean that we might not be administering the right combination chemotherapy in over 50% of our patients.

Some studies have shown that patients with MSI-H CRC appear to have ineffectual or even detrimental responses to 5FU-based adjuvant chemotherapy. We all know that 5FU is the cornerstone of most of the combination chemotherapy we administer to patients (FOLFOX, FOLFIRI, CapeOX, XelOX). In addition, the 2012 study on BRAF and KRAS in Nigerians by Abdulkareem et al. also suggests that Nigerian patients may benefit more from anti-EGFR therapy (Cetuximab, Panitumumab) than Caucasians. However, cost implications will make prescribing these drugs a mere academic exercise in most Nigerian patients.