Anorectal carcinoma involving the female genital tract: the morbidity and implications for sexual function

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Abstracts

Background: Carcinoma of the colon and anorectum affect a younger age group in Africans, and patients often present late with advanced disease.
Method: A retrospective review of 22 females treated for anorectal carcinoma.
Results: Fourteen females had genital tract involvement; their mean age was 33.8 years. Thirteen patients had abdominoperineal resection. The other patient had a divided colostomy. Adjuvant chemotherapy was given to 12 patients. Wound infection occurred in 3 patients, and wound dehiscence in one patient. Five patients resumed sexual activity 6 months after surgery. One patient died of pneumonia 23 days after surgery.
Conclusion: Anerectal carcinoma causes morbidity related to the genital tract and sexual function in females.

Key words: Anorectum, carcinoma, female, sexual function

Introduction

Colon and ancrectal carcinoma have been reported as rare in Africans, but these malignancies may not be as rare das was previously thought. [1-4]

Colorectal carcinoma being one of the common neoplastic diseases occurs infrequently in young adults. [4] These cancers affect a younger age group in Africans and patients often present with advanced diseases. [4-6] Carcinoma of the colon and anorectum extending to surrounding structures still represent a proportion of tumours despite efforts at establishing early diagnosis. [7] In females, involvement of the genital tract can have important implications for sexual and reproductive function in young patients. This is a report of a small number of females with genital tract involvement and highlights important aspects of presentation, management and outcome.

Patients and methods

From January 1987 - December 2000, 22 females were treated for carcinoma of the anorectum by general surgeons at the

Ahmadu Bello University Teaching Hospital, Zaria, Nigeria as identified from the hospital records. Fourteen patients had genital tract involvement and form the basis of this report.

Results

The mean age was 33.8 years (range 13 – 52 years). The duration of symptoms before presentation was 3 - 20 months (mean 10.5 months). The clinical features common to all patients were anal protrusion, rectal bleeding, constipation alternating with diarrhoea, tenesmus and perineal pain (table 1). No patient presented with Duke's stage A disease, 7 had stage B, 6 stage C and one stage D.

Tumour histology
Seven of the tumours were mucinous adenocarcinoma, 4 well differentiated and 3 moderately differentiated.

Treatment
Thirteen patients had abdominoperineal excision of the rectum, with en-bloc resection of the posterior vaginal wall, and uterus where involved. Frozen section histology was not available. Reliance was therefore placed on complete resection of the uterus and fallopian tubes in 6 patients, and the posterior vaginal wall in all 13 patients. The vagina was reconstructed there after. Six resections were palliative due to fixation of the tumour to the pelvic walls. One patient with large bowel obstruction had diversion colostomy before definitive surgery. Twelve patients had adjuvant chemotherapy with 5-fluorouracil at a does of 12mg/kg body weight to a maximum of 750mg intravenously 3-4 weekly for one to six months

Sexual function
Sexual function was assessed through interviews by the surgeons and it meant penetrative vaginal intercourse. Twelve patients were married and had stopped having sexual intercourse at presentation due to the disease. Five patients were not having intercourse for fear of the disease recurring. There was no record of sexual function in 5 patients.

Morbidity, mortality and follow-up
The duration of hospital stay was 14-26 days (mean 18 days) the complications noted were wound dehiscence in one patient, and wound infection in 3.

One patient died 23 days after surgery from pneumonia. The only patient with Duke's D disease died after 6 months, and one with stage C after 18 months from the disease. Eight patients (57.1%) came for follow-up, of which 3 were lost to follow-up 12 months after surgery. Five patients were never seen again (table 2).

Table 1: Presentation of 14 patients

Presentation	No.
Rectovaginal fistula	8
Vaginal discharge	6
Vulval itching	2
Vaginal pain	4
Intestinal obstruction	3

Some patients had a combination of these features

Figure 1: Colorectal carcinoma destroying posterior vaginal wall

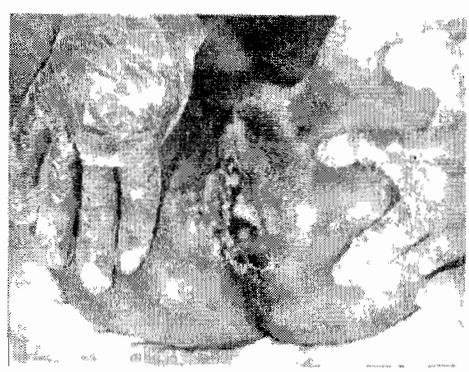

Table 2: Stage, treatment, and outcome of 14 patients

Patient	Duke's stage	Treatment	Sexual intercourse	Follow-up
1.	B	A-P. 5-FU	Yes	Never Seen
2.	B	A-P. 5-FU	Yes	12 months
3.	C	A-P. 5-FU	Refused for fear	12 months
4.	B	A-P. 5-FU	Yes	Never seen
5.	C	A-P, 5-FU	No record	12 months
6.	C	A-P, 5-FU	No record	18 months
7.	B	A-P, 5-FU	Yes	18 monhts
8.	C	A-P, 5-FU	Refused for fear	Died 18 months after surgery
9.	B	A-P, 5-FU	Yes	18months
10.	C	A-P, 5-FU	No record	18 months
11.	B	A-P	No record	Died 23 days after surgery
12.	D	Colostomy, 5- FU	No record	Died 6 months after surgery
13.	B	A-P, 5-FU	Not married	18/12
14.	C	Colostomy , A-P , 5- FU	No record	Never seen after discharge

A-P –Abdomioperineal Excision of the rectum
5-FU = 5-Fluorouracil

Discussion

Anorectal carcinoma occurs in a young age group in our environment, [5] as shown by the mean age of the patients in this report. Fourteen patients had involvement of the vagina by the disease, and the uterus in six of them with vaginal involvement, The involvement of the vagina would seem to explain the symptoms in most of these patients.

Patients in our environment commonly present late to hospital [8] the same occurs in Ibadan. [6] Ajao and colleagues, have reported that carcinoma is usually seen late in Ibadan, treatment modality and design had been modified to suit their patients. [6] In a previous study from our center, between 74% and 95% of the common cancers including colorectal carcinoma present with advanced disease. [8] In this report seven patients (50%) had advanced disease on presentation (figure 1).

Abdominoperineal excision with on-block resection of the posterior vaginal wall, uterus and tubes, was performed in six patients. Availability of frozen section facility should improve the determination of tumour free resection margins at surgery; unfortunately no such facility exists in our center. It is, however, important to note that the lymphatics of the ovaries, tubes and sigmoid colon have intercommunication, [7] making en-bloc resection necessary for adequate treatment. During abdominoperineal resection for carcinoma of the rectum, as much of the mesentery as possible should be resected, so as to include the lymphatic vessels that may contain tumour. [5] Bonfanti and colleagues found this beneficial to their patients and of low risk to prophylactically resect the ovaries in cancers of the rectum and sigmoid colon. [7] Tumour was fixed to the pelvic wall in some five patients, so that surgery was at best palliative.

Adjuvant chemotherapy with 5-fluorouracil was administered intravenously to most of the patients. For patients with advanced disease, 5-fluorouracil is useful but, the response is poor and side effects may impair quality of life. [9] 5-fluorouracil can be given intrarectally or instilled intraperitoneally for patients with trouble some ascites. [6] Radiotherapy may also be beneficial to these patients. [6-9]

Patients with advanced disease may benefit from laser treatment, endoscopic laser was found safe, effective and without mortality in carcinoma of the colorectum by Mesko and colleagues. [10]

The more tumour cells approach normal shape and arrangement, the less malignant is the tumour, and the prognosis is good, conversely the greater the undifferentiated cells, the more malignant tumour is, the prognosis is poor. [11] In a study of colorectal anal cancer in our centre, 89% of the tumours were adenocarcinoma. [2]

Impaired sexual performance in patients, who had abdominoperineal resection of the rectum, can be a problem. This may be due to residual tumour, tumour recurrence and the operation itself. [5]Stahlgren and Ferguson, [12] observed that only two of 34 females that had abdominoperineal resection complained of sexual dysfunction. The remaining 32 actually reported that sexual function was unchanged or improved. Dissection was probably limited in these patients, who were being treated for ulcerative colitis. With reconstruction of the vagina where possible after abdominoperineal resection, sexual intercourse may be possible in survivors. This is of utmost psychological importance to these young patients, some of whom may desire more children. Five of our patients resumed sexual activity within six months of surgery. Although males are the active partners in sexual intercourse, [5] the role played by females should not be over looked.

Many patients in our environment reject colostomy. Workers in Enugu [5]

have also reported this. The reasons include illiteracy, culture and religion.

Majority of patients in this study were lost to follow-up, nine months after surgery. This is a problem in our environment, where many patients hardly come for follow-up. [2] The reasons for this practice may include finance, long distance between the hospital and their homes. Some of our patients may have died at home.

Anorectal carcinoma, affecting the female genital tract is not uncommon in our environment. Late presentation of patients, in our centre is probably responsible for poor outcome; this may also have implications on their sexual function after treatment. Adequate, early evaluation of patients and referral to appropriate centers may improve the outcome in these often-young patients.

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Table 3: Duration of procedures in 74 patients who had day case surgery

Duration (mins)	No. (%)
0-15	3 (4.1)
16-30	20 (27.0)
31-45	40 (54.1)
45-60	8 (10.8)
61-75	3 (4.1)

Pain was the commonest immediate postoperative problem. It occurred in the recovery room in all the patients. Pain control was achieved with dipyrone and pentazocine injections in 30 patients (40.5%) and 10 patients (13.5%) respectively, while the remaining 34 patients (46.0%) responded to oral paracetamol. Other recovery room problems experienced by the patients were vomiting in one patient, headache and prolonged drowsiness in 2 patients each. All these subsided before the patients were discharged from recovery room.

Postoperative complications occurred in 8 patients (10.8%). Two patients (2.7%) presented after 48 hours postoperatively with minimal haematoma collection. Their wounds were examined and redressed, following which they were reassured and discharged home immediately. Two patients (2.7%) had headache, which responded to paracetamol; neither of them had spinal anaesthesia for their surgical procedure. Four patients (5.4%) had postoperative wound infection, which was noticed after stitches removal. They all responded to antibiotics and daily dressings.

No patient required readmission and there was no mortality.

Discussion

The concept of the day case surgery is not new in the Western World. However, the practice has witnessed a dramatic growth within the last two decades, and increasing emphasis is now being placed on day case surgery. [7-9] Even in developing countries, the initial reluctance to the acceptance of day case surgery, predicated on the fear of inadequate community support resources for the success of the program, has given way to wide embrace and patient acceptability. [2,10-12] Several hospitals in Nigeria are now involved in providing day case surgery service for different age groups, ranging from the very young to the very old, and reports from different centres are encouraging. [1-5]

Although, LAUTECH Teaching Hospital is relatively young, the centre is also active in the provision of day case surgery service, albeit, for a limited range of procedures, as seen in this study. Day case surgery accounted for 69.2% of all elective surgical procedures performed within the study period. This is comparable to the figures reported in similar studies in Nigeria, [4,5] and is a reflection of the growing trend in the provision of day case surgery service. Also like in several previous reports in our environment, [1-6] most of the procedures were of minor and intermediate categories, which is compatible with the present level of awareness and limited social and medical support resources available within the communities. It is our believe that the only procedures that should be selected for day case surgeries are those that will cause minimal physiological disturbance, minimal postoperative pain and have little risk of haemorrhage to enhance safety and retain the confidence of our patients. These remain the criteria for selection of day-case surgery patients in our centre. However, with improvement in social services, better community awareness and home nursing support services, the cases are likely to become more diverse. Elsewhere in the developed world,

technological advances have revolutionized the number of operations permissible and day case surgery has really increased both in volume and diversity. [13]

Anticipated duration of procedures is also an important consideration in selection of patients in our centre. We often limit our selection to procedures that would not take more than 60 minutes to complete, especially in children. This is because even with modern anaesthetic agents, prolonged general anaesthesia is associated with prolonged recovery and complications like nausea and vomiting. [9]. These complications may be a source of considerable anxiety and distress to patients at home and may result in increased re-admission rate. The procedures were completed within 60 minutes in more than 95% in our patients. This agrees with the practice in many centres, [2,10] and it probably accounted for the low complication rate experienced in our series.

The essential requirements of a suitable anaesthetic technique for day-case surgery include safety, rapid recovery and minimal postoperative problems. Although with modern general anaesthetic agents, recovery after surgery can be both rapid and complete; regional anaesthesia offers distinct advantages in day-case surgery. For instance there is reduction in hazards and discomforts which follow general anaesthesia such as sore throat, airway trauma and muscle pain, and there is less tendency to nausea or vomiting, resulting in faster patient discharge. In addition the residual analgesia from the block may protect the patient from the initial pain postoperatively. However the role of central neural blockade remains controversial. [14] The issue of post-dural puncture headache is frequently raised, especially, with respect to spinal Anaesthesia. [15] Fortunately the introduction of small gauge conical-tipped needles that result in less dural trauma has significantly reduced the incidence of post –spinal headache. [14] Today, spinal anaesthesia is widely used in Europe, and is the most commonly used central block for day-case surgery. [14, 16] Lignocaine (either hyperbaric 5% or isobaric 2%), which is a short acting local anaesthetic agent is commonly used as done in this study to avoid delayed patient recovery. The risk of major neurological complications is very small and the incidence of postspinal headache in ambulatory surgery has been found to be comparable to the incidence of headache following general anaesthesia. [15] However we suggest that clear instructions are given to day-care surgery patients who have had spinal anaesthesia. Headache when they occur usually respond to conservative therapy consisting of rest, liberal oral fluid and mild analgesics. Severe cases, which are not common may require epidural blood patch. Only two of our patients had spinal anaesthesia because of lack of experienced physician anaesthetists to administer the block for the most part of the period covered by the study. It is for the same reason that appropriate regional anaesthesia could not be provided for circumcision and tongue-tie release, which were therefore done without any form of anaesthesia.

In conformity with previous reports, [2,3] pain was the commonest problem experienced in the immediate postoperative period. This is probably a reflection of the extent to which pain has remained an unresolved problem in surgical practice. It is particularly not surprising that virtually all the patients in our series experienced some degree of pain in the recovery room. Pain is a common feature in the recovery room when the anaesthetic procedure lacks good residual analgesic effects; Lignocaine, the local anaesthetic agent used for infiltration and regional blocks in our series is such a short acting drug, besides none of those who had general anaesthesia was given intraoperative

analgesic supplementation. These side effects are undesirable in day case procedures. We however recognize that there are analgesic drugs and techniques, which could be used intraoperatively to enhance perioperative analgesia with minimal effects on the patient's fitness for discharge. For instance the use of potent short acting narcotics like alfentanil and fentanyl has been found useful and safe for perioperative analgesia in day-case anaesthesia. However the appropriate use of these drugs either intraoperatively or in the recovery room requires the expertise of experienced physician anaesthetists who were not available in our centre.

Paracetamol administered either orally or rectally has been shown to be a simple and safe method of controlling less severe forms of pain. [17] A total dose of 60mg/Kg/day of oral paracetamol given in four-divided doses was used in our patients for postoperative analgesia at home. This dose is small compared to the current regime, which recommends a loading dose of 30-40mg/Kg, followed by regular dosing of up to 90mg/Kg/day to maintain therapeutic concentrations. [17] Although none of our patients reported back to the hospital or sought other medical treatment as a result of intolerable pain, it is not unlikely that some of them, especially those who had intermediate surgical procedures may have had to bear some considerable amount of discomfort at home. Most patients have accepted pain as an inevitable consequence of surgery, which they are often prepared to accommodate. [18] Hence they often complain less, limiting them to the prescribed medication. It must however be emphasized that the provision of adequate analgesia for day-case patients in the postoperative period is an area that needs to be improved in order to enhance the comfort of our patients. The practice of local anaesthetic infiltration of wound edges is popular and the pre-emptive use of non-steroidal anti-inflammatory analgesics has also been found useful for pain control in the immediate postoperative period. [19] These methods are now being used to enhance perioperative analgesia in our patients.

The complication rate of 10.8% in our series is comparable with figures quoted in previous reports. [2,19] There were no mortality in this series and the unplanned admission rate, which is an indication of failure of day case surgery, was zero. Furthermore, no morbidity has been recorded in any of these patients up till the time of this review.

In conclusion, day case surgery is feasible, safe and applicable to our health care system. Despite the inadequate community support resources like transportation, telecommunication and home nursing services, the result from various health institutions, including a relatively young teaching hospital like ours, are encouraging. We hope that this report would encourage other young teaching hospitals and Federal Medical Centres to establish functioning day case surgery units.

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