Bahrain Medical Bulletin, Vol.22, No.4, December 2000

Pattern of Colo-rectal Surgery at Dammam Central Hospital

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Objective: **This study aims to analyse the patterns of presentation, investigation and surgical management of major colo-rectal diseases admitted to the Department of Surgery, Dammam Central Hospital, one of the major hospitals in the Eastern Province of Saudi Arabia.**

Methods: **The case notes of all patients who underwent major colo-rectal procedure (excluding piles and ano-rectal sepsis) over 2-year period (1995 and 1996) were retrospectively reviewed.**

Results: **There were 23 colo-rectal procedures carried out in 21 patients (15 males, 6 females) with mean age of 45 (range 15-75) years during the two year period (1995-1996). Fifteen patients (70.4%) were Saudis. The commonest presenting symptoms were: constipation (81%), bleeding per rectum (57%), abdominal pain and discomfort (47.6%), weight loss (42.8%), abdominal mass (19%) and tenesmus (19%). Ultrasonography was performed in 20 and was informative in 5 cases (mass 3, liver metastases 1 and mesenteric lymphadenopathy in 1). CT scan was performed in 8 patients and was abnormal in 4. Nineteen patients (90.5%) underwent colonoscopy, which revealed colonic lesions in fifteen patients. Only 3 patients had barium enema that showed malignant lesion in 2. The operations performed were hemicolectomy (eight), anterior resections (four), abdomino-perineal resection of rectum (three), Hartmann's procedures (two), reversal of Hartmann's (two), subtotal and total colectomies (three). Majority of the procedures was carried out for cancer (66.7%), followed by adenoma (9.5%). There were 4 complications (17%) and 5 deaths (21.7%); all in patients with cancer. The mean hospital stay was 20 (range 10-67) days.**

Conclusion: **We conclude that colonoscopy is efficiently used at Dammam Central Hospital to investigate large bowel symptoms replacing barium enema. Major colo-rectal procedures are conducted at a rate of 1 per month. Majority (66.5%) of colonic operations performed were for cancer and that surgery for inflammatory bowel conditions seem to be uncommon.**

Bahrain Med Bull 2000;22(4):174-76

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Major colo-rectal surgery especially that for cancer represents a major section of general surgeon's work in Europe and North America[1-3]. This is not matched by a similar trend in the Kingdom of Saudi Arabia. This may be explained by the fact that the incidence of colo-rectal cancer in Saudi Arabia is low[4]. However, recently, there has been a noticeable increase in the incidence of colorectal cancer. The exact cause for this increase is unknown but it may be attributed to our increased awareness of the disease and recent developments of efficient gastroenterological services in the major hospitals in the Eastern Province. This increase may well be attributed also to westernization of our diet and increase in the environmental carcinogens. Dammam Central hospital is one of the largest hospitals in the Eastern Province of Saudi Arabia with an active gastroenterology service and a busy general surgical department. This study was conducted to establish the pattern of presentation, investigation and surgical management of various colo-rectal diseases presenting to our Department of Surgery.

METHODS

All colorectal surgical procedures performed at the Department of Surgery of Dammam Central Hospital over two-year period (1st January 1995 - 31st December 1996) were retrospectively reviewed. The presenting symptoms, preoperative investigations, operative procedures, pathological reports of the excised specimens, postoperative morbidity and mortality and hospital stays were noted.

RESULTS

Over the study period (1995 and 1996), there were 23 colorectal surgical procedures carried out on 21 patients (15 males, 6 females) with mean age of 45 (range 15-75) years. Fifteen patients (70.4%) were Saudis. Eight procedures (34.8%) were conducted on emergency basis. The commonest presenting symptoms were: constipation (seventeen), bleeding per rectum (twelve), abdominal pain and discomfort (ten), weight loss (nine), abdominal mass (four) and tenesmus (four). Ultrasonography was performed in 20 and was informative in 5 cases (abdominal mass in 3, liver metastases 1 and mesenteric lymphadenopathy in 1). CT scan of the abdomen was performed in 8 patients and was abnormal in 4. Nineteen (90.5%) patients underwent colonoscopy, which revealed colonic lesion in 15 and was normal in 4 patients. Only three patients had barium enema, which showed malignant lesion in 2.

The operations performed were: right hemicolectomy (six), left hemicolectomy (two), anterior resection (four), abdomino-perineal resection of rectum (three), Hartmann's procedure (two), reversal of Hartmann's (two), subtotal colectomy (two), total colectomy (one) and resection rectopexy (one). The range of pathology encountered was colorectal cancer (fourteen), adenoma (two), volvulus (one), ileo-caecal tuberculosis (one), Crohn's disease (one), caecal diverticulum (one), rectal prolapse (one) and metastatic adenocarcinoma of unknown origin (one). There were 4 (17%) complications and 5 (21.7%) deaths all in patients with cancer (Table 1 and 2). The mean hospital stay was 20 (range 10 - 67) days.

Table 1. **Complications associated with colorectal surgery over the study period**

Complications	Number
Wound infection	2
Intra-abdominal collection	1
Anastomatic stricture due to tumour recurrence	1
Total (%)	4(17)

Table 2. **Causes of death after colorectal surgery over the study period**

Deaths	Number
Myocardial infarction	3*
Liver metastases	1
Hepatic encephalopathy	1
Total (%)	5(21.7)

** 60 days, 70 days and 12 months after operation.*

DISCUSSION

Colorectal surgery is believed to be relatively uncommon in Saudi Arabia as colorectal pathology, which requires surgical intervention such as malignancy, is rare. However, there has been an upsurge in colonic pathology especially that of colonic cancer in recent years. Over our study period of 2 years, only 23 major surgical colonic procedures that is, approximately a procedure per month were performed at our department; one of the busiest surgical departments in the Eastern Province of Saudi Arabia. This is indeed very low. However, this may be explained by the fact that some patients diagnosed at our institution may either refuse the proposed surgical procedure and present themselves somewhere else or may be referred to specialized centres; most commonly King Faisal Specialist Hospital in Riyadh for further management upon their own request. Another valid explanation is that colo-rectal pathology requiring major surgical procedures are actually uncommon. A large prospective multicentre study is needed to prove or disprove the latter over several years.

Although malignant neoplasm of the colon and rectum are relatively uncommon in the Kingdom of Saudi Arabia[4], the majority of our colorectal procedures (66.7%) were performed for cancer especially that of the rectum. This is consistent with other reports from the Kingdom, which showed the rectum to be the single most commonly affected site[4,5]. Other less common pathology included colonic volvulus, ileocaecal tuberculosis, Crohn's disease of terminal ileum, caecal diverticulum and rectal prolapse.

The commonest presenting symptoms were constipation and bleeding per rectum. These two nonspecific symptoms are also the most commonly encountered in our surgical clinics in patients with haemorrhoids. Therefore, they should be looked into

with utmost caution by the treating physician and colonoscopic examination is mandatory if there is even a slight suspicion of cancer. One of the patients in this study developed seeding of cancer cells from a rectosigmoid carcinoma in a haemorrhoidectomy scar[6] carried out in another hospital prior to her presentation. Routine flexible sigmoidoscopy should be conducted under general anaesthesia in any patient over the age of 40 years undergoing haemorrhoidectomy if sigmoidoscopy has not been done preoperatively. Colonoscopy remains the most commonly used preoperative investigation for various colonic symptomatology and has yielded positive results in 79% of cases. On the other hand, barium enema was rarely used in our hospital over the study period; only 3 patients had barium enema performed. Although, abdominal ultrasound was performed in almost all the patients, it was informative in 24% only. As ultrasound is operator-dependent, its sensitivity in detecting colonic lesions is variable. However, as ultrasound is non-invasive and readily available all of our patients underwent ultrasonography. It is also valuable in detecting liver secondaries greater than 1 cm in diameter and abdominal lymphadenopathy. More information can be obtained by contrast CT scan, which is considered less operator-dependent than ultrasonography.

CONCLUSION

Over this short study period, we conclude that colonoscopy is efficiently used at Dammam Central Hospital to investigate large bowel symptoms replacing barium enema which became more or less obsolete. Colorectal surgical procedures are relatively uncommon and are conducted at a rate of one procedure per month. Majority (66.5%) of colorectal operations was performed for cancer especially that of the rectum and that surgery for inflammatory conditions seems to be uncommon. A large prospective multicentre study including major hospitals in the area is, however, needed to confirm these facts.

REFERENCES

1. Cancer Research Campaign. Cancer of the large bowel - UK. Factsheet 18.1. London: Cancer Research Campaign, 1993.
2. Boring CC, Squires TS, Tong T. Cancer statistics 1991. CA 1991;41:19-36.
3. National Institutes of Health Conference. Adjuvant therapy for patients with colon and rectal cancer. JAMA 1990;264:144-50.
4. Isbister WH. Malignant neoplasia of the colon, rectum and anus at the King Faisal Specialist Hospital and Research Center. Ann Saudi Med 1992;12:429-33.
5. Al-Sebayel M, Al-Dohayan A, Al-Qasabi QO. Colorectal Carcinoma: review of 110 cases. Ann Saudi Med 1990;10:646-9.
6. Meshikhes AWN. An Unusual implantation of a rectosigmoid adenocarcinoma into a haemorrhoidectomy scar. Ann Saudi Med 1998;18:242-3.