



The Surgical Treatment of Colon Cancer

INTRODUCTION

Colorectal cancer is the commonest abdominal malignancy in Australia. The incidence is superseded only by breast disease in women and prostate cancer in men. One in twelve people in Australia develop the disease.

There are two aspects in the treatment of all cancers: firstly, the treatment of the primary disease; secondly, the treatment of any potential systemic disease. With regards to colon cancer, the former involves adequate surgery, the latter adjuvant chemotherapy.

PRE-OPERATIVE ASSESSMENT

A full clinical assessment is required. This involves a consultation with the Specialist Surgeon who elicits a history of the clinical presentation, and performs an examination of the patient. Elective colorectal surgery requires a thorough pre-operative assessment of the patient's general health. This may not be feasible in the emergency setting. Pre-operative staging of the disease with a CT scan may be warranted in some cases. A full bowel preparation is required. DVT prophylaxis is crucial and includes intermittent calf compressors, TED stockings, and subcutaneous Heparin injections. Peri-operative antibiotics are administered. Arrangements are made for post-operative Intensive Care Unit management if necessary, dependent on the patient's overall general health. A "team approach" is maintained in the operating room and this includes the surgeon, anaesthetist, assistant surgeon and usual theatre staff.

SURGERY

The surgical procedure frequently involves a long, midline, abdominal incision. A laparoscopic procedure may be feasible, thereby limiting the length of the abdominal incision. A full diagnostic laparotomy/laparoscopy is performed with initial entry into the peritoneal cavity to assess the extent of the disease.

The surgery for colorectal cancer involves a radical resection of the tumour and the associated segment of the colon. This is an anatomical dissection obeying the natural tissue planes and is based on the blood supply and lymphatic drainage of the involved colon. The operations are named appropriately, right and left hemicolectomy. Sigmoid and rectal cancers require an Anterior Resection of the rectum. The lymphatic drainage follows the blood supply of the colon and a radical resection involves extirpation of all the lymphatics pertaining to that part of the colon. A primary anastomosis of the colon is performed in nearly all cases using either a "handsewn" or "stapled" technique. The exception may be for a completely obstructed recto-sigmoid cancer requiring a colostomy. A temporary ileostomy may be necessary, to "protect" low rectal anastomoses.

THE SURGICAL TREATMENT OF COLON CANCER (CONT.)

POST-OPERATIVE MANAGEMENT

Analgesia is achieved with intravenous Paracetamol and a PCA, (Opiate infusion). A paralytic ileus occurs after surgery on the gastro-intestinal tract and hence no oral intake is possible during the first 48 hours.

The potential complications of any operation have two components: local, and systemic. "Local" abdominal complications include bleeding, anastomotic leakage and wound infection. "Systemic" sequelae may include cardiac, respiratory, renal or other vascular complications (DVT and stroke). Significant complications after colorectal surgery are infrequent, the risk dictated by the age and general medical condition of the patient. A General Physician is often included in the medical team managing the patient post-operatively.

STAGING

Universal staging systems apply to all cancers, and serve three purposes:

1. Accurate assessment of the extent of the disease.
2. The establishment of scientifically based treatment protocols.
3. Prognosis.

Dukes staging system (Cuthbert Dukes 1932, St Mark's Hospital, London) applies to colorectal cancer, and has withstood the test of time. Dukes A implies the tumour is confined to the bowel wall. B: through the wall, C: lymph node involvement. Dukes C and some B cases require adjuvant chemotherapy. Numerous other pathological indices are also taken into account with regard to the decision concerning chemotherapy.

MULTI-DISCIPLINARY TEAM APPROACH

A MDT approach to colorectal cancer is maintained at the Sydney Adventist Hospital. Patients are presented at the MDT meetings, including Medical Oncologists, Radiation Oncologists, Pathologists, Surgeons, Radiologists, Nurses, Counsellors and Support Staff. Patients enter into a "Circle of Care", which provides the basis for their longterm medical management.