Colorectal Cancer – Clinical Features, Dukes Classification & Screening in Australia

Dukes staging of colorectal carcinoma (Essential Surg 2nd Ed., pp 302)
Dukes A: Tumour is confined to the bowel wall without it penetrating into extra-colic tissues
Dukes B: Tumour has spread to extra colic or extra rectal tissues but there is no lymph node metastases
Dukes C: There is lymph node metastases

- C1: Only a few nodes involved around the area of tumour growth
- C2: Lots of nodes involved, extends up to proximal limit of resection

Dukes D: Distant metastases involving lymph nodes or other tissues (usually liver), such that it is surgically incurable.

Patterns of Colorectal cancer bleeding R vs. L sided

- If there is bright red blood on the toilet paper with associated pain, then the problem is more distal such as: anus or rectum.
- If there is bright red blood mixed in with the faeces, then the problem is more in the sigmoid/lower sigmoid/descending colon.
- If the blood is dark coloured then the problem is more in the proximal colon. The patient may also present with iron deficiency anaemia.

Role of screening for colorectal cancer in Australia
Colorectal cancer has the highest incidence in terms of number of new neoplastic cases occurring in Australia, therefore making it an important condition for the general public to be aware of. Men are more affected than women. Colorectal cancer incidence increases with age, and data shows the earlier the stage of diagnosis then higher the survival. Survival rates for Dukes A-D are 99%, 78%, 33%, rare, respectively. Based on the incidence and stage survival rates, the role of screening for colorectal cancer in Australia is quite an important one.

Options for screening in Australia begins with annual faecal occult blood tests starting at age 40, although there is much debate about the age at which tests should begin. Up to 50% of positive results are false positives, but this type of screening reduces mortality from colorectal cancer by 33%. Flexible sigmoidoscopy can also be done every 5 years starting at age 50, but at best it can only visualise half of the bowel. Combine FOBT & flexible sigmoidoscopy is usually suggested where flexible sigmoidoscopy is proposed, but this has significant costs associated with it. Colonoscopy is the most sensitive and specific method for examining the large bowel, in 95% of cases – the caecum can be visualised. This is suggested every 5-10 years starting at the age of 50.

Screening for colorectal cancer using the above approach aims to identify asymptomatic people in the community who have polyps / premalignant lesions, or have early stages of cancer development. This will dramatically improve their survival rate, based on the figures established above. Surveillance aims to monitor the patients with higher than average risk, especially those with a family history of polyps or inflammatory bowel conditions. Monitoring is important because of the slow transforming nature of premalignant lesions, or slow growing nature of the cancer.

Based on the data, the incidence of colorectal cancer is rising; therefore screening in the future will be an important preventative practice. More efficient screening methods are being evaluated, including the possibility of detecting exfoliated markers shed by the neoplasm for assay, and

identifying the genes responsible for the series of genetic steps that involve progress from normal colonic epithelium to neoplastic changes.