

Year 4 2012-2013

Adult Surgical Specialties

Breast Lumps

SCENARIO 1

It's Anna's 37th birthday. She is sitting in the surgical outpatients with her husband, John. Three weeks ago she thought she could feel a lump in her right breast and went straight to her GP who referred for an urgent appointment. Last week she was seen by the consultant who detected a 3 cm lump in the left upper outer quadrant and a firm mobile 1.5 cm node in the axilla. He performed a fine needle aspiration (FNA). Anna has been convinced she had cancer from the moment she discovered the lump and is anxious and tearful. John wants to know why Anna and other women like her aren't screened for breast cancer, in the same way as cervical smears are done to detect early cancer of the cervix. He refuses to talk with Anna about her fear of cancer. His father died last year of a lung cancer which had spread to the liver before it was diagnosed.

Anna and John are seen by the registrar who explains that the cells from the FNA were not normal. The lumps are not definitely cancerous, but they could be and Anna will need to be admitted to have the lump in the breast removed and also the gland taken from under the arm so that both can be looked at under the microscope.

SCENARIO 2

Anna has had surgery successfully and is recovering in hospital. The lumps removed were cancerous, but the laboratory reports that they have been entirely excised. Also, several scans have shown no spread of cancer throughout the body. However, her consultant explains that even so, the next step is for her to have chemotherapy, as there is still a chance that some tumour cells may still have "seeded out" around the body. Anna doesn't really want 'chemo', as she remembers how sick her aunt was when she had treatment like this for ovarian cancer. She and her husband also wonder why she can't have radiation treatment instead – or even nothing at all, and wait and see how things go? They are even further confused, as the consultant is asking whether she would enter a clinical trial of two different types of chemotherapy systems. He says that breast specialists are still trying to find the best treatment regimes, and the trial will help them decide this. However, Anna

wants to discuss the situation with her two young daughters – she has heard there is a test for genetic susceptibility to breast cancer, and she wants to know if her girls should have this test, and if so when.

OBJECTIVES

1. Structure and Function in Health and Disease

- Revisit oncogenes, suppressor genes, cell cycle control genes.
- Compare and contrast the various ways in which the commoner cancers may present.
- Explain how cancers show variations in metastatic behaviour and relate this to the cellular and molecular level.
- Discuss the implications of the above for prognosis and treatment.
- Describe how the histological appearances of a tumour can influence prognosis and treatment
- Describe the procedures used to obtain biopsies from cancers in the following sites: breast, lung, prostate, rectum, ovary and cervix.
- Describe the type of cancer histology you would expect to see in each site.
- Describe the principle underlying the choices of the different therapeutic options available for the treatment of cancer with reference to the treatment of either:
 - i) A young woman with an early cancer of the cervix, and
 - ii) A young woman with a poorly differentiated stage 2 cancer of the breast.
- Explain why cancers may have been present for some time before they become clinically detectable.

2. Individual, Groups and Society

- Describe the potential psychosocial consequences of undergoing treatment for cancer of the breast.
- What factors might influence a person's willingness to participate in a screening programme?
- Identify three improvements in cancer treatment that have come about as a result of randomised controlled clinical trials and three that have not.

3. Population Perspective

- Use epidemiological data on cancer incidence and prevalence in health care planning.
- Debate the principles of screening versus diagnosis of the symptomatic patient.
- Describe how screening abnormalities may be followed up.
- Explain how screening of high risk families conforms to the general principles of screening.

4. Professional Values and Ethics

- Describe, with justifications, what information you would disclose to a patient who is considering entering a clinical trial. Discuss the role of the following personnel in screening programmes and controlled clinical trials:
 - i) Counsellors
 - ii) Doctors
 - iii) Other members of the health care team.
- List the important features informing patients of the diagnosis of cancer.
- Discuss how doctor's attitudes to cancer may influence patient outcomes.

CORE CONTENT

1. Structure and Function in Health and Disease

- Typical presentations of cancer of the breast, cervix, ovary, lung, prostate, testis and bowel; staging and screening; prevalence and incidence of each; frequency of presentation in primary care for each cancer.
- Genes associated with metastasis; differing metastatic patterns, typical patterns of cancers itemised above; lymphatic and haematogenous dissemination; relationships between differentiation and/or histological type and likelihood of metastasis, prognostic significance of metastases in given cancers.
- Oncogenes, suppressor genes, cell cycle control genes in relation to carcinogenesis.
- Significance of the exponential growth of cancers. Typical tumour cell burden at presentation and death.
- Major histological types of cancer. Differentiation grading staging systems. TNM.
- Mechanisms by which cancer cells are eradicated; range of therapeutic options – chemotherapy; endocrine therapy; side-effects of therapies.

2. Individuals, Groups and Society

- Coping styles, relationship with prognosis; quality of life; patient autonomy and decision making; information needs and communication issues.
- Health care beliefs; age, educational status; inducements.
- Screening programmes cost and value.

3. Professional Values and Ethics

- Principles and requirements of clinical trials; consent; patient autonomy; legal implications and potential for litigation.
- Communicating with the cancer patient.