

14. Cardiac

ALL PATIENTS

Regularly at Long Term Follow Up clinic:

- 1) Enquire re:
 - Exercise tolerance
 - Chest pain
 - Palpitations
 - Shortness of breath
- 2) Measure blood pressure

RISK FACTORS

- Anthracyclines and related drugs
 - Daunorubicin
 - Doxorubicin
 - Epirubicin
 - Mitozantrone
 - Idarubicin
 - Amsacrine
- ?High dose cyclophosphamide
- Radiotherapy to field including thorax, thoracic spine or mediastinum (including left flank, TBI)

ALL PATIENTS WHO HAVE RECEIVED ANTHRACYCLINES REQUIRE:

- 1) Echocardiogram 1-3 months after last dose of anthracycline
- 2) If normal at this time, repeat echocardiogram 5 yearly from last dose of anthracycline +/- at end of pubertal growth spurt
- 3) If abnormal at any stage, discuss with Cardiologist

NB Patients who have not had an echocardiogram within the first 6 months after last anthracycline dose should undergo echocardiography 3 yearly if repeatedly normal.

Abnormal echocardiogram defined as shortening fraction $\leq 28\%$ (Cube method)

RECIPIENTS OF THORACIC / MEDIASTINAL RADIOTHERAPY ONLY (IE NO CARDIOTOXIC CHEMOTHERAPY)

- 1) In view of risk of ischaemic heart disease, consider review of other risk factors eg fasting lipid measurement
- 2) Prompt investigation of cardiac symptoms as clinically indicated

HIGHER RISK PATIENTS WHO MAY WARRANT MORE FREQUENT SURVEILLANCE INCLUDE:

- Patients previously treated for early anthracycline cardiotoxicity
- Total anthracycline dose >250 mg/m²
- Combination of radiotherapy and anthracycline
- Strenuous exercise eg weightlifting
- Pregnancy - close monitoring **essential**
- Patients on growth hormone therapy
- Patients on sex steroid replacement therapy
- Patients with congenital heart disease

SPECIALIST REFERRAL

- 1) All patients with an abnormal clinical examination should be referred to a Cardiologist for assessment and advice about further management
- 2) Patients with abnormal echocardiogram (see above) should be referred to a Cardiologist for assessment and advice about further management
- 3) All female patients with a risk factor for cardiotoxicity who became pregnant require close liaison with an Obstetrician

REFERENCES

- Reviews**
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- Specific**
- 1) Nysom K, Colan SD, Lipshultz SE. Late cardiotoxicity following anthracycline therapy for childhood cancer. *Prog Pediatr Cardiol* 1998; **8**: 121-138.
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