

Guidelines For Prevention And Treatment Of Infection In Post Splenectomy Patients Or Those With A Dysfunctional Spleen

Immuno-suppressed patients have a greater risk of potentially life-threatening infections since high antibody levels and intact complement are required for the liver to imitate splenic function.

Causes of Asplenism

- Traumatic Rupture
- Lymphoma
- Idiopathic thrombocytopenia
- Hereditary spherocytosis
- Thalassaemia major
- Splenectomy

Causes of reduced splenic function

- Sickle cell disease
- Coeliac disease
- SLE
- Lymphoma
- Leukaemia
- Amyloidosis
- Inflammatory bowel disease
- Dermatitis herpetiformis
- Bone marrow transplant

At risk patients should be:-

- Identified by labelled hospital records, a GP "at risk" register, possibly a Medic-Alert bracelet and given information regarding their risks.
- Fully informed on action in case of infection.
- Given antibiotic prophylaxis for the longer of 2 years post splenectomy or up to age 16. In immuno-suppressed patients and those with lympho-reticular neoplasia, lifelong prophylaxis is needed. Penicillin V 250mg bd or Erythromycin 250mg 12 hourly are preferred with reduced doses for children. Self administration supplies of a broad spectrum beta-lactamase stable antibiotic (Amoxycillin) should be provided and patients should seek assistance in case of shivering, pyrexia or malaise. In that event blood cultures should be taken and Benzyl Penicillin 600mg twice daily or Cefotaxime 2G 8 hourly commenced intravenously until culture results are known.
- Vaccinated at least 2 weeks before planned splenectomy with:
 - Pneumococcal Vaccine - deferred until age 2 in babies. Administered two weeks post-op in emergency splenectomy. Boosted 5 yearly if antibody levels fall, more often in immuno-suppressed patients.
 - Haemophilus Influenza Type B (Hib) Vaccine - if not already administered under National Programme. (i.e. most children over 4 years old).
 - Influenza Vaccine - annually.
 - (Meningococcal Vaccine group A & C is not recommended since B strain predominates in infections.)
- Protected from exposure to malaria with repellents, nets and clothing, and prescribed anti-malarial agents if visits to endemic areas are unavoidable.
- Notified to the Consultant Haematologist if admitted.

Reference: Br Med J vol 312:430-4, 1996.

Vaccinations in the immunocompromised person: Guidelines for the patient taking cytotoxic drugs, immunosuppressants and/or steroid therapy

General Information

- The use of live vaccines is contra-indicated.
- Immunosuppressives must be stopped at least 3 months before giving live vaccine.
- If use of live vaccines is indicated give at least 2 weeks before immunosuppressive therapy is commenced.
- If a patient is immunised while taking immunosuppressives they may not mount the appropriate immune response so assume they have not been immunised and repeat at least 3 months after therapy has ceased.
- Consider using immunoglobulins if contact risk (e.g. varicella, measles).

Travel Advice

Only 2 live attenuated viruses, yellow fever and polio, are used regularly for foreign travel.

- Yellow fever. This must **not** be given. Patients should be advised not to travel. If the patient has to travel an exemption statement may be accepted.
- Polio vaccine. The live oral vaccine must **not** be given. Killed inactivated vaccine can be.
- Typhoid. The live form should **not** be given. Killed vaccine is available but only 70% protective.
- Inactive viruses can be given. These include Rabies, Anthrax, Cholera, Plague.

Home Advice

- Oral live Polio Vaccine (OPV) must not be given to patient or household contacts. Inactivated form (IPV) can be used.
- Measles, Mumps, Rubella (MMR) - all three are live and must not be given to patient but use is not contraindicated in the household contacts. Exposure to measles should be treated with immunoglobulin regardless of prior immunisation.
- BCG is contraindicated.
- Use of inactive virus vaccines is to be encouraged but the immune response may not be as good as in the healthy and more frequent boosters may be required. Because there is an increased risk in the immunocompromised from influenza, pneumococcal, meningococcal, haemophilus B, hepatitis B and tetanus infection, immunisation against these organisms should be considered.

Patients On Steroids

Live vaccines must not be given to patients taking moderate or high doses of steroids for longer than 2 weeks.

There is no consensus as to what low dose steroid is (10mg per day or below is thought a sensible compromise). A full -immunosuppressive dose may be 20mg per day and not 40mg as previously accepted. There are no contra-indications to using live vaccines if:

- Steroid is for less than 2 weeks
- Treatment is alternate day with short acting steroid
- By topical application
- By intra articular or soft tissue injection
- Replacement therapy with physiological doses e.g. adrenal insufficiency
- Long term low dose steroids (10mg per day or less)

Moderate or high dose steroid must be stopped 3 months before live vaccines can be administered.

Cytotoxic/immunosuppressant drugs used by Rheumatologists include Azathioprine, Chlorambucil, Cyclophosphamide, Cyclosporin and Methotrexate

References:

- Immunisation against infectious disease. Salisbury and Begg 1996 HMSO
- Vaccination in the Immunocompromised Person Grabosky, Hadler, Chen & Edwards, Bulletin of Rheumatic Disease 1995 44(8) 3-6
- Recommendation of the Advisory Committee on Immunisation Practices -
- Use of Vaccines and Immune Globulins for Persons with Altered Immunocompetence, Morbidity Weekly Reports 1993 42(RR-4) 1-18

These guidelines issued by the British Society for Rheumatology, 1998