Doncaster and Bassetlaw Teaching Hospitals
NHS Foundation Trust

Asplenic Patients Policy

Management of Patients with Absent or Dysfunctional Spleen

This procedural document supersedes: PAT/IC 2 v.5 – Asplenic Patients Policy Management of Patients with Absent or Dysfunctional Spleen

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Author/reviewer: (this version)	Dr L. Jewes Consultant Microbiologist
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Approved by:	Infection Prevention and Control Committee
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Next review date:	July 2020
Target audience:	Trust Wide Clinical Staff

Amendment Form

Please record brief details of the changes made alongside the next version number. If the procedural document has been reviewed **without change**, this information will still need to be recorded although the version number will remain the same.

Version	Date Issued	Brief Summary of Changes	Author
Version 6	25 August 2017	• Updates to "Green Book" including Table P7 • Changes to vaccination advice • Changes to antibiotic dosages • Updated references	Dr Jewes, Consultant Microbiologist
Version 5	22 Sept 2014	• Policy in new Trust format • Change to title • Section 6.2.Website address updated • Tables 1 and 2 updated in accordance with "Green Book" • Minor additions to text • References updated • Equality Impact Assessment added Appendix 1	Dr Jewes, Consultant Microbiologist
Version 4	March 2011	• Additional section "Immuno-suppressed patients" • Additional section "Animal/tick bites" • Update of vaccination section according to "Green Book" guidance with insertion of new tables.	Infection Prevention and Control Team
Version 3	March 2009	• Amendment form and contents page added • A section on 'Duties and 'Education and Training' added • Updated tem 5 – Action to be Taken and item 6 – Antibiotics – please read in full • Sections numbered • References updated	Infection Prevention and Control Team

Contents

1. INTRODUCTION

People with an absent or dysfunctional spleen are at increased risk of severe infection. The risk is greater in the first 2 years following splenectomy, but persists throughout life. Certain medical conditions, such as sickle cell disease and coeliac syndrome are also accompanied by functional hyposplenism. The commonest infections are due to encapsulated bacteria, including *Streptococcus pneumoniae (*commonest*)*, *Haemophilus influenzae type b (Hib)* and *Neisseria meningitidis.* Other organisms which can cause infection include *Salmonella spp., Capnocytophaga canimorsus, E.coli* and *Babesia spp.*

The Department of Health issue advice in March 2001[2] and advice on vaccinations can be found in the "Green Book"[4]. The British Committee for Standards in Haematology has also issued guidance[5].

This policy applies to functionally asplenic/hyposplenic patients who are *asymptomatic.* Any patient who develops clinical symptoms of sepsis should be treated accordingly.

2. PURPOSE

To ensure that asplenic/hyposplenic patients are optimally managed to prevent infections to which they are particularly susceptible.

3. DUTIES AND RESPONSIBILITIES

This policy covers infection prevention and control management issues and applies to all health care workers employed by the Trust that undertake patient care, or who may come into contact with affected patients.

Trust staff this includes:-

- Employees
- Agency/Locum/Bank Staff/Students
- Visiting/honorary consultant/clinicians

Each individual member of clinical staff within the Trust is responsible for complying with the standards set out in the Policy. They need to be aware of their personal responsibilities in preventing the spread of infection. It is the responsibility of Divisional Directors, Associate Medical Directors and Assistant Directors of Nursing to ensure compliance with this standard.

4. PROCEDURE

The following procedures should be followed for all asplenic/hyposplenic patients (this includes conditions such as homozygous sickle cell disease and coeliac disease which may lead to splenic dysfunction):

4.1 Medical Records

The medical records should be clearly marked including the alert sheet in the case notes highlighting asplenic/hyposplenic status and the patient should carry a card or wear a bracelet/necklet stating the risk of infection.

4.2 Vaccination

Ideally, vaccination should be given four to six weeks before elective splenectomy. Where this is not possible, it can be given up to two weeks before treatment. If it is not possible to vaccinate beforehand, splenectomy should never be delayed. In the case of emergency splenectomy, vaccination should be delayed until at least two weeks after the operation. If the patient leaves hospital before this time, then vaccinations should be given before discharge.

Full details on individual vaccines can be found in the "Green Book" at https://www.gov.uk/government/publications/immunisation-of-individuals-with-underlying-medical-conditions-the-green-book-chapter-7 [4]

The following vaccines are recommended routinely, in accordance with **Table 1**

- **Pneumococcal vaccine** ("Green Book" – chapter 25) [3]
- **Haemophilus influenza type B (Hib)** – ("Green Book" – chapter 16)
- **Meningococcal vaccines** ("Green Book" – chapter 22)[2]
- **Influenza vaccine** ("Green Book" – chapter19)
  Should be given annually in the autumn (September – November) to all over the age of 6 months. Vaccination should be given if the current immunisation season has not ended (generally September – April) but ideally before influenza viruses start to circulate

- **Other routine immunisations**, including live vaccines, can be given as usual unless the patient is immunosuppressed.

Table 1

Practical schedule for immunising individuals with asplenia, splenic dysfunction or complement disorders (including those receiving complement inhibitor therapy*). (4)

First diagnosed under 1 year of age

Children should be fully immunised according to the national schedule, and should also receive:

- two doses of MenACWY vaccine at least one month apart during infancy;
- one additional dose of PCV13* and one dose of MenACWY conjugate vaccine two months after the 12-month vaccinations; and
- one additional dose of Hib/MenC and one dose of PPV23† after the second birthday.

First diagnosed at 12-23 months of age

If not yet administered, give the routine 12-month vaccines: Hib/MenC, PCV13, MMR and MenB, plus:

- one additional dose of PCV13* and one dose of MenACWY conjugate vaccine two months after the 12-month vaccinations; and
- one additional dose of Hib/MenC and one dose of PPV23*,** after the second birthday.

If not already received, two primary doses of MenB vaccine should be given two months apart at the same visit as the other vaccinations.

First diagnosed from two years to under ten years of age

Ensure children are immunised according to the national schedule, and they should also receive:

- one additional dose of Hib/MenC and one dose of PPV23*; followed by:
- one dose of MenACWY conjugate vaccine two months later.

If not already received, two primary doses of MenB vaccine should be given two months apart at the same visit as the other vaccinations.

First diagnosed at age ten years onwards

Older children and adults, regardless of previous vaccination, should receive:

- one dose of Hib/MenC and one dose of PPV23*; followed by:
- one dose of MenACWY conjugate vaccine one month later.

If not already received, two primary doses of MenB vaccine should be given one month apart at the same visit as the other vaccinations.

All patients

- Annual influenza vaccine each season (see Chapter 19)

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* Patients on Eculizumab (Soliris®) therapy are not at increased risk of pneumococcal disease and do not require PPV23 or additional doses of PCV13.

** Patients with splenic dysfunction should receive boosters of PPV at five yearly intervals.

4.3 Antibiotics

The first 2 years after splenectomy is the period of highest risk, but antibiotic prophylaxis is recommended for life, particularly for high risk groups. Cases of fulminant infection have been reported more than 20 years after splenectomy. Antibiotic prophylaxis may be discontinued in children >5 years with sickle cell disease who have received pneumococcal immunisation and who do not have a history of pneumococcal infection.

Low risk patients should be counselled as to the risks and benefits of prophylaxis, particularly where adherence is an issue.

The antibiotic of choice is penicillin V (phenoxymethylpenicillin).

If a patient is admitted to hospital and prescribed a beta- lactam antibiotic, the patient's prophylactic penicillin V should be suspended for this period and recommenced once the course of treatment is complete.

Note: Antibiotic prophylaxis is not fully reliable

Recommended dosages:

Adult and child 5-17 years	**phenoxymethylpenicillin**	250 mg b.d
Child 1-4 years	"	125 mg b.d
Child 1-11 mths	"	62.5 mg b.d

Erythromycin should be used in penicillin-allergic patients.

Recommended dosages:

Adult & Child >8 years	500 mg b.d
Child 2-7 years	250 mg b.d
Child 1-12mths	125 mg b.d

Patients should also be given a small supply of suitable antibiotic to begin immediately if they have a febrile illness. This is particularly important for patients who, for whatever reason, do not take long-term prophylaxis.

4.4 Immunosuppressed Patients

In general, immunisation should be delayed for at least 3 months after immunosuppressive radiotherapy or chemotherapy. Antibiotic prophylaxis should be prescribed in the interim.

4.5 Foreign Travel

Malaria poses more of a threat to people without a functioning spleen. The importance of taking anti-malarial prophylaxis and other precautions (insect repellents, correct clothing and mosquito screens at night) should be emphasised.

For asplenic/hyposplenic patients travelling to countries in which Group A meningococcal disease is the common type, it should be ensured that they are immunised with meningococcal ACYW vaccine.

Patients should be educated as to the potential risks of overseas travel, particularly to malarious areas.

4.6 Animal/Tick Bites

Asplenic/hyposplenic patients are particularly susceptible to infection following animal bites and insect bites and should be alerted to this, so that they attend promptly for appropriate management.

Capnocytophaga canimorsus may cause severe sepsis following animal (particularly dog) bites. The infection responds to a five-day course of co-amoxiclav (or clarithromycin if penicillin-allergic).

Babesiosis is a rare tick-borne infection, which can affect asplenic patients following a tick bite.

4.7 Patient Information

"I have no functioning spleen" cards are available from Public Health England [1] to alert health professionals to the risk of overwhelming infection. A patient information leaflet can also be downloaded from the same site and patients may wish to purchase an alert bracelet or pendant.

5. TRAINING/ SUPPORT

The training requirements of staff will be identified through a training needs analysis. Role specific education will be delivered by the service lead."

Staff will receive instructions and direction regarding infection prevention and control practice and information from a number of sources:-

- Trust Policies and Procedures available on the intranet
- Ward/departmental/line managers
- As part of the mandatory infection control education update sessions which can be delivered by a number of formats
- Infection Prevention and Control Educational displays/ posters
- Trust Infection Prevention and Control Team

The training delivered by the IPC team to educate staff who screen, treat and care for patients, will include, guidance on documentation at all appropriate points is the patient journey**.** Infection prevention and control must be included in individual Annual Professional Development Appraisal and any training needs for infection prevention and control addressed.

6. MONITORING COMPLIANCE WITH THE PROCEDURAL DOCUMENT

Monitoring	Who	Frequency	How Reviewed
Training needs for infection prevention and control	Ward and Departmental Managers Training and educational Department	Annually	Staff Professional Development Appraisal
Compliance with policy to ensure asplenic/ hypsplenic patients are optimally managed	Consultant Medical Staff	As cases are rare - following each individual case	Alert sheet in case notes of patients highlighting asplenic/hyposplenic status

In addition to the above the Infection Prevention and Control Team will review this policy in the following circumstances:-

- When new national or international guidance are received.
- When newly published evidence demonstrates the need for change to current practice.
- Every three years routinely.

7. DEFINITIONS

Spleen: A large organ in the human body which filters foreign substances from the blood and produces antibodies to fight infection.

Asplenic: Absence of the spleen

Hypospenic: Dysfunctional spleen.

Immunosuppressed: Suppression of the immune system and its ability to fight infection.

8. EQUALITY IMPACT ASSESSMENT

An Equality Impact Assessment (EIA) has been conducted on this procedural document in line with the principles of the Equality Analysis Policy (CORP/EMP 27) and the Fair Treatment For All Policy (CORP/EMP 4).

The purpose of the EIA is to minimise and if possible remove any disproportionate impact on employees on the grounds of race, sex, disability, age, sexual orientation or religious belief. No detriment was identified.

A copy of the EIA can be seen in Appendix 1.

9. ASSOCIATED TRUST PROCEDURAL DOCUMENTS

This policy should be read in conjunction with other Trust Policies and protocols for the prevention and control of HCAI in line with the Health and Social Care Action 2008.

- Hand Hygiene Policy – PAT/IC 5
- Standard Infection Prevention and Control Precautions – PAT/IC 19
- Trust Mental Capacity Act – PAT/PA 19
- Fair Treatment for All Policy – CORP/EMP 4
- Equality Analysis Policy – CORP/EMP 27

10. REFERENCES

1 **Splenectomy: Leaflet and Card** (2015) https://www.gov.uk/government/publications/splenectomy-leaflet-and-card

2 ***Department of Health.*** Meningococcal immunisation for asplenic patients. Current Vaccine and Immunisation Issues. 9 March 2001.

3 ***Immunisation against Infectious Diseases (2013) "The Green Book".*** Chapter 25. Pneumococcal. Department of Health. Updated March 2017

4 ***Immunisation against Infectious Diseases (2013) "The Green Book".*** Chapter 7: Immunisation of individuals with underlying medical conditions. Department of Health. Updated September 2016

5 ***Davis, JM et al; Review of guidelines for the prevention and treatment of infection in patients with an absent or dysfunctional spleen***. Prepared on behalf of the British Committee for Standards in Haematology by a Working Party of the Haemato-Oncology Task Force. British Journal of Haematology 155 (3). 308-317.

APPENDIX 1 - EQUALITY IMPACT ASSESSMENT PART 1 INITIAL SCREENING

Policy	Care Group/Executive Directorate and Department	Assessor (s)	New or Existing Service or Policy?	Date of Assessment
Asplenic Patients Policy -PAT/IC 2 v.6	Corporate Nursing Infection Prevention and Control	Dr Linda Jewes Consultant Microbiologist	Existing Policy	July 2017

1. Who is responsible for this policy? Infection Prevention and Control Team

2. Describe the purpose of the policy? To ensure that asplenic/hyposplenic patients are optimally Managed to prevent infection to which they are particularly susceptible.

3. Are there any associated objectives? None

4. What factors contribute or detract from achieving intended outcomes? None

5. Does the policy have an impact in terms of age, race, disability, gender, gender reassignment, sexual orientation, marriage/civil partnership, maternity/pregnancy and religion/belief? No

- **If yes, please describe current or planned activities to address the impact** N/A

6. Is there any scope for new measures which would promote equality?

7. Are any of the following groups adversely affected by the policy?

a. Protected Characteristics	Affected?	Impact
b. Age	No	
c. Disability	No	
d. Gender	No	
e. Gender Reassignment	No	
f. Marriage/Civil Partnership	No	
g. Maternity/Pregnancy	No	
h. Race	No	
i. Religion/Belief	No	
j. Sexual Orientation	No	

8. Provide the Equality Rating of the service/ function/policy /project / strategy

Outcome 1 ←	Outcome 2	Outcome 3	Outcome 4

9. Date for next review **July 2020.**

Checked by: Dr Linda Jewes **Date: July 2017**