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.6 – Asplenic Patients Policy Management of Patients with Absent or Dysfunctional Spleen

Did you print this document yourself?
The Trust discourages the retention of hard copies of policies and can only guarantee that the policy on the Trust website is the most up-to-date version. **If, for exceptional reasons, you need to print a policy off, it is only valid for 24 hours.**

Executive Sponsor(s):	David Purdue - Director of Nursing, Midwifery and Allied Health Professionals
Author/reviewer: (this version)	Dr L. Jewes Consultant Microbiologist
Date written/revised:	June 2020
Approved by:	Infection Prevention and Control Committee
Date of approval:	18 June 2020
Date issued:	22 June 2020
Next review date:	July 2023
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 7	22 June 2020	• Added section/s Patients Lacking Capacity and Data Protection • Updated roles and responsibilities on monitoring Compliance • Removal of HiB vaccine from schedule	Dr Jewes, Consultant Microbiologist
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

Contents

Page No.

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 other haemoglobinopathies) 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.

PATIENTS LACKING CAPACITY

Sometimes it will be necessary to provide care and treatment to patients who lack the capacity to make decisions related to the content of this policy. In these instances staff must treat the patient in accordance with the Mental Capacity Act 2005 (MCA 2005).

- A person lacking capacity should not be treated in a manner which can be seen as discriminatory.

- Any act done for, or any decision made on behalf of a patient who lacks capacity must be done, or made, in the persons Best Interest* see definitions.
- Further information can be found in the MCA policy, and the Code of Practice, both available on the intranet.

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[1]

4.2 Vaccination

All patients should be vaccinated fully in line with the national schedule.

Due to the risk of overwhelming infection, addition Pneumococcal vaccine is recommended for all patients who have or are at risk of developing splenic dysfunction in the future (including those with sickle cell and coeliac disease), with additional booster doses of pneumococcal polysaccharide vaccine (PPV) recommended every five years. These patients should also have annual influenza vaccination.

Additional vaccination against meningococcal groups A, C, W, Y and B should be offered to patients with absent or dysfunctional spleens, at appropriate opportunities. Hyposplenism in coeliac disease is uncommon in children. Therefore, patients diagnosed with coeliac disease early in life and well managed are unlikely to require additional doses of these vaccines beyond those given in the routine immunisation schedule. Only those with known splenic dysfunction should receive additional vaccination against meningococcal infection.

Because of a long-standing successful vaccination programme in children the risk of Hib disease is extremely low; therefore, *additional Hib vaccination is no longer recommended*.

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] https://www.gov.uk/government/publications/pneumococcal-the-green-book-chapter-25
- **Meningococcal vaccines** ("Green Book" – chapter 22)[2] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/554011/Green_Book_Chapter_22.pdf
- **Influenza vaccine**

  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* (chapters refer to those in the "Green Book")

First diagnosed or presenting 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 4 weeks apart during their first year
- an additional priming dose of PCV13, such as to receive a total of two priming doses of PCV13 with an 8-week interval in their first year
- a booster dose of MenACWY conjugate vaccine 8 weeks after the vaccinations scheduled at one year of age
- an additional booster dose of PCV13, to be administered at least 8 weeks after the routine PCV13 booster scheduled at 1 year of age, and
- one dose of PPV23 after the second birthday[¥] and at least 8 weeks after the last dose of PCV13

First diagnosed or presenting at 1 year to under 2 years of age

If not yet administered, give the routine vaccines due at 1 year of age: Hib/MenC, PCV13, MMR and MenB vaccines, plus:

- one dose of MenACWY conjugate vaccine at least 8 weeks after the vaccines scheduled at 1 year of age
- an additional booster dose of PCV13, to be administered at least 8 weeks after the routine PCV13 booster scheduled at 1 year of age, and
- one dose of PPV23[¥] after the second birthday

First diagnosed or presenting from two years to under ten years of age

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

- one dose of MenACWY conjugate vaccine and
- one dose of PPV23[¥]
- If they have not received the routine 2+1 schedule for MenB, ensure they have received two doses of MenB 8 weeks apart since first birthday
- If they have not received any PCV previously, they should receive a dose of this first followed by the dose of PPV23 at least 8 weeks later

First diagnosed at age ten years onwards

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

- one dose of PPV23[¥], MenB and MenACWY conjugate vaccine
- an additional MenB vaccine dose 4 weeks later

All patients aged over 6 months

Annual influenza vaccine each season (see Chapter 19)

* Patients on complement inhibitor therapy (Eculizumab or Soliris®) are not at increased risk of pneumococcal disease and do not require PPV23 or additional doses of PCV13 (see Chapter 25).

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. At highest risk are children under 16, adults over 50 and those with previous invasive pneumococcal disease.

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, such as those more than 2 years following splenectomy due to trauma, 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 all staff will be identified through a training needs analysis. Role specific education will be delivered by the service lead or nominated person. Please refer to the Mandatory and Statutory Training Policy (CORP/EMP 29) for details of the training needs analysis, as staff will require different levels of training.

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
The policy will be reviewed in the following circumstances:-	APD Process Group IPCT	Every three years routinely, unless: • When new national or international guidance are received. • When newly published evidence demonstrates need for change to current practice. Action required from Root Cause Analysis Serious Incident Investigation Report	Approved Procedural Document (APD) database Policy will be approved and ratified by the Infection Prevention and Control Committee
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

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.

Best Interest - There is no single definition of Best Interest. Best Interest is determined on an individual basis. All factors relevant to the decision must be taken into account, family and friends should be consulted, and the decision should be in the Best interest of the individual. Please see S5 of the MCA code of practice for further information.

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.

- Control of Substances Hazardous to Health (COSHH) Guidance – CORP/HSFS 7
- Glove Use Policy (Latex) - CORP/HSFS 13
- Hand Hygiene - PAT/IC 5
- Health and Safety at Work - Medical Surveillance - CORP/HSFS 2
- Mental Capacity Act 2005 - Policy and Guidance including Deprivation of Liberty Safeguards (DoLS) - PAT/PA 19
- Standard Infection Prevention and Control Precautions Policy - PAT/IC 19
- Fair Treatment For All Policy - CORP/EMP 4
- Equality Analysis Policy - CORP/EMP 27.

10. DATA PROTECTION

Any personal data processing associated with this policy will be carried out under 'Current data protection legislation' as in the Data Protection Act 2018 and the General Data Protection Regulation (GDPR) 2016.

For further information on data processing carried out by the trust, please refer to our Privacy Notices and other information which you can find on the trust website.

11. REFERENCES

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

2 **Immunisation against Infectious Diseaes (2013) "The Green Book".** Chapter 22. Meningococcal. Department of Health. Updated March 2013

[3] ***Immunisation against Infectious Diseases (2013) "The Green Book".*** Chapter 25. Pneumococcal. Department of Health. Updated January 2020

[4] ***Immunisation against Infectious Diseases (2013) "The Green Book".*** Chapter 7: Immunisation of individuals with underlying medical conditions. Department of Health. Updated January 2020

[5] ***Davis, JM et al; Review of guidelines for the prevention and treatment of infection in patients with an absent or dysfunctional spleen(2011)***. 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	Division	Assessor (s)	New or Existing Service or Policy?	Date of Assessment
Asplenic Patients Policy -PAT/IC 2 v.7	Corporate Nursing Infection Prevention and Control	Dr Linda Jewes Consultant Microbiologist	Existing Policy	June 2020

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 tick (✓) outcome box

Outcome 1 ✓	Outcome 2	Outcome 3	Outcome 4

Date for next review July 2023

Checked by: Beverley Bacon IPCP **Date:** 16th June 2020