Preventing Infection in Asplenic or Hyposplenic Adult Patients. Information for GPs

Individuals with an absent (due to splenectomy) or dysfunctional spleen (e.g., sickle cell anaemia, coeliac disease, chronic graft versus-host disease (GVHD), splenic irradiation) are at life-long increased risk of overwhelming infections due to encapsulated bacteria such as *Streptococcus pneumoniae*, *Haemophilus influenzae* type b (Hib) and *Neisseria Meningitidis.*[1]

Infection risk in those with splenic dysfunction/asplenia may be reduced by employment of preventative strategies such as long-term antibiotic prophylaxis, appropriate vaccinations, patient education, healthcare communication and supply of standby antibiotics [1]

Vaccination Schedule

Vaccination is recommended for all asplenic and hyposplenic patients according to the national immunisation schedule, including additional vaccination and future booster doses against pneumococcal infection. Reference should be made to the most up to date Green Book Chapter 7 (UK Health Security Agency guidelines).[1]

Vaccination	Initial administration	Booster details
Pneumococcal vaccine polyvalent (PPV23¥) *(e.g., Pneumovax®23)*	2 weeks pre-splenectomy or 2 weeks post-splenectomy.	Additional dose recommended every 5 years
Meningococcal ACWY quadrivalent conjugate *(e.g.,* Menveo®, Nimenrix® and MenQuadfi®***)***	2 weeks pre-splenectomy or 2 weeks post-splenectomy.	-
Meningococcal B *(e.g.,* Bexsero® and Trumenba®*)*	2 weeks pre-splenectomy or 2 weeks post-splenectomy	Additional dose 4 weeks after initial dose
Influenza vaccine	Administer as soon as practicable pre- or post- splenectomy to afford seasonal protection	Yearly vaccination recommended

- Eligible patients who have no splenectomy surgery or have past splenectomy with no vaccination protection should receive the course of initial vaccinations as soon as is practical.
- Patients with asplenia or dysfunction of the spleen may also be eligible for Covid 19 vaccinations and boosters programmes. Consult the Green Book chapter 14a for the current guidance.[1]
- Ensure that appropriate patients are correctly coded on the GP clinical system to ensure they are included in the eligibility searches used by your practice for pneumococcal and influenza vaccination boosters.
- Vaccination and revaccination should be clearly recorded in the patient notes.
- Vaccination administration not covered by a Patient Group Directive (PGD) can be administered using a Patient Specific Directive (PSD).
- Reimbursement for vaccines purchased and administered by the GP practice should be made through the FP34 form, unless they have already been supplied free of charge to the practice from central supplies.
- A manual claim for an item of service fee can also be submitted by the practice where there is a medical need for these vaccines for indications not covered by the standard CQRS payments.

Antibiotic Prophylaxis

All asplenic/splenectomy patients should be offered lifelong antibiotic prophylaxis. The increased risk of infection in patients with an absent or non-functioning spleen is life-long, but is highest early after splenectomy, with the biggest risk being from pneumococcal infection.[2]

All adults should receive antibiotic prophylaxis for at least 2 years following a splenectomy.

Patients deemed to be at higher risk

- Aged <16 years or >50 years old
- Inadequate serological response to pneumococcal vaccination
- A history of previous invasive pneumococcal disease
- Splenectomy for underlying haematological malignancy, particularly those who have received splenic irradiation or who have ongoing GvHD are also at continuing high risk.
- Patients with active ongoing graft-versus-host disease

Patients classified as at "lower risk of invasive pneumococcal infection" may choose to discontinue prophylaxis after counselling, however, these patients have a higher risk of invasive infection than immunocompetent persons, and must have rescue antibiotic available and seek immediate medical attention if unwell.

Antibiotic Prophylaxis (First line)	Phenoxymethylpenicillin	250mg PO twice a day[3]
Antibiotic Prophylaxis (Alternative option in penicillin allergy)	Erythromycin	500mg PO twice a day[3]

Standby antibiotics

Patients can also be given a five day supply of antibiotics for emergency use at home in case of infection as directed. Follow any recommendations on the choice of antibiotic from the acute trust.

Standby Antibiotics (First Line option on SASH, ASPH and Scottish Antimicrobial Prescribing Group[2] guidance)	Amoxycillin	500mg PO three times a day for five days
Standby Antibiotics (First Line option on RSH guidance)	Co-amoxiclav	625mg PO three times a day for five days
Standby Antibiotics (alternative option in penicillin allergy)	Clarithromycin	500mg PO twice a day for five days

Patients should be advised to:

- Initiate standby antibiotics at first sign of infection (e.g., symptoms of fever, cough, sore throat, headache, rash, abdominal pain, drowsiness etc.)
- Seek medical attention urgently (via GP or Emergency Department)
- Standby packs that have been used or have expired will need to be resupplied by the GP or by the hospital if the patient has been admitted for treatment of the infection. Expired packs should be returned to a community pharmacy for safe disposal. Prescribed antibiotics should not be shared with family and friends.

Patient Education
Patients should be given an alert card or letter with information regarding risk of overwhelming infection. Supporting information and alerts cards are available via the link here.
(see UKHSA leaflet & Card)[4]

Parents/carers may wish to invest in a pendant or bracelet.

Patients should be advised to alert healthcare professionals treating them that they do not have a spleen.

Discussion with the patient should include:

- Potential risks associated with travel to malarial areas and importance of anti-malarial prophylaxis.
- If patients acquire an animal bite that breaks the skin, an antibiotic course as per local animal bite guidelines should be considered as they are at an increased risk of infection.
- Patients should adhere to the recommended vaccination schedule and should confirm if extra vaccinations are required if planning to travel abroad.

References

1. UK Health Security Agency. The Green Book. Immunisation against Infectious Disease. Accessed January 2024
2. The Scottish Antimicrobial Prescribing Group. Asplenic/splenectomy prophylaxis. Accessed January 2024
3. National Institute of Health and Care Excellence. British National Formulary. Access online February 2024.
4. UK Health Security Agency. Information for Patients with an Absent or Dysfunctional Spleen. Updated March 2022