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Prevention of overwhelming sepsis in asplenic patients: could do better

The spleen has an important function in the filtering, phagocytosis, and removal of bacteria from the circulation, and post-splenectomy or asplenic patients run a significantly increased risk of severe sepsis, as highlighted by a recent survey in the UK by D J Waghorn and colleagues.[1] They found a mortality rate of 48% among the 77 patients with overwhelming post-splenectomy infection (OPSI) included in their 4-year survey. There are guidelines for the prevention of infection in such patients.[2] However, the guidelines seem to be ignored. In Waghorn and colleagues' survey only 22 of 70 patients had received a pneumococcal vaccine, only 17 of 72 asplenic patients had taken antibiotics between splenectomy and their presentation with OPSI, and only one patient had been issued a medical alert card.

Although the risk is generally considered greatest in the first 2–3 years after splenectomy, this risk is lifelong: Waghorn and colleagues found that most cases occurred 10–30 years after splenectomy. This finding supports the recommendation for lifelong antimicrobial prophylaxis. Thus patients unrecognised to be asplenic or who have undergone splenectomy many years ago (for example, before the recommended vaccines were available) should be actively sought and offered what is now considered best-practice preventive measures.

The recommendations for prevention include education of the patient, immunisation (most importantly pneumococcal vaccine), antibiotic prophylaxis, and specific advice concerning travel (increased risk of falciparum malaria), animal bites (risk of infection by the bacterium *Capnocytophagia canimorsus*) and tick bites (risk of babesiosis). Lifelong prophylactic penicillin is recommended although compliance with a lifelong regimen may be difficult. Some people[2] recommend the holding of a reserve antibiotic (eg, 3 g amoxicillin) to be taken at the onset of a febrile illness. Such a regimen is sensible especially for patients not on long-term antibiotic prophylaxis. However, Waghorn and colleagues report that only two of a possible 62 patients held such a reserve antibiotic supply. Increasing antimicrobial resistance, especially of *Streptococcus pneumoniae* to the commonly used penicillin and macrolides, is a concern and reinforces the importance of pneumococcal vaccine.

Others[3] too have reported that a significant number of post-splenectomy patients do not follow best-practice guidelines. Possible reasons for non-adherence to such guidelines include patients not being given, or having forgotten, the correct advice. How to improve adherence is the challenge. The UK guidelines were published in 1996, and if given a high profile they may yet result in a decrease in OPSI, but it is probably too early to know. Regional and district population-based programmes for the prevention of OPSI have been reported: one has included the dissemination of guidelines to general practitioners and hospital doctors, active surveillance for asplenic patients, and notification of the general practitioner when a patient is identified.[4] The advice given to patients should be accompanied by an information or fact sheet, and patients should wear or carry a medi-alert bracelet, necklace, or card, have their medical records flagged, and receive regular reminders when revaccination is due. A register of patients having undergone splenectomy or who are asplenic for other reasons, with regular reminders to both the patients and their physicians, should be considered.

Despite questions remaining about the efficacy of specific preventive measures, current guidelines, if strongly recommended by physicians and followed by patients, are likely to prevent deaths from OPSI. As Waghorn and colleagues note, there "is still improvement needed to achieve best practice for the management of asplenic patients".

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