Long term management after splenectomy

National guidelines, please

EDITOR,—Mary McMullin and George Johnston's editorial contributes little to a comprehensive strategy to prevent sepsis after splenectomy.¹ It merely reiterates current recommendations and contains important omissions. Overwhelming infection after splenectomy is a specific syndrome with a high mortality and should be distinguished from other infections after splenectomy. The alarmingly high incidence claimed for the condition has since been corrected²; in the study from which the corrected figure (6.9%) comes half of the deaths related to infection occurred within three months of operation and two fifths of patients had underlying malignant or haematological disease.³ A more meaningful way to assess the incidence may be to calculate it as the number of infections over time; by this method one study showed the incidence of overwhelming infection after splenectomy to be only 0.04 per 100 person years.⁴

Prevention strategies need to be approached logically before splenectomy is undertaken. *Streptococcus pneumoniae* is responsible for only half of all infections after splenectomy,⁵ and other encapsulated organisms are likely to cause severe infections, particularly in children and young adults. These patients should all receive meningococcal A and C vaccine before splenectomy. The editorial briefly mentioned *Haemophilus influenzae* type b vaccine but said only that it "may be useful . . . after splenectomy." It should be given before splenectomy to all children who have not yet received it and to all adults. Both of these vaccines can be given with pneumococcal vaccine.

A policy of lifelong penicillin for all is disputed, even by Zarrabi and Rosner,⁶ whom McMullin and Johnston quote to support their argument: Zarrabi and Rosner state that prophylaxis "would seem reasonable . . . up to 10 years after splenectomy."⁶ Beyond five years postoperatively in adulthood, when the risks of overwhelming infection after splenectomy are much reduced, prophylaxis should be reserved for only the most vulnerable subgroups (those with malignant or haematological disease). Broader spectrum agents such as amoxycillin may be more suitable.

Finally, malaria is transmitted not by ticks but by mosquitoes. If advice to patients is going to include how to avoid rare infections such as babesiosis it must also include the risks of dog bites causing fulminant septicaemia with *Capnocytophaga canimorsus* (DF-2 bacillus)—a well documented risk after splenectomy.

What is required is for the Department of Health in conjunction with the Joint Committee on Vaccination and Immunisation to issue specific updated guidelines on preventing sepsis after splenectomy, taking into account all the relevant

issues. Emphasis needs to be placed on who is to take responsibility for their implementation. It is not enough for surgeons and general practitioners to continue to act opportunistically, often with little communication or consensus on how to prevent this avoidable condition.

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- 1 McMullin M, Johnston G. Long term management of patients after splenectomy. *BMJ* 1993;307:1372-3. (27 November.)
- 2 Correction: Long term management of patients after splenectomy. *BMJ* 1994;308:6.
- 3 Pimpl W, Dapunt O, Kaindl H, Thalmner J. Incidence of septic and thromboembolic-related deaths after splenectomy in adults. *Br J Surg* 1989;76:517-21.
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- 5 Ellison EC, Fabri PJ. Complications of splenectomy: etiology, prevention, and management. *Surg Clin North Am* 1983;63:1313-30.
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Widen criteria for vaccination

EDITOR,—In common with other districts we are seeking to increase awareness among our general practitioners, hospital doctors, and local residents of sepsis after splenectomy and the need for adequate prophylaxis.^{1,2} Each year Plymouth Public Health Laboratory (which serves a population of about 425 000 in south west Devon and east Cornwall) diagnoses 40 cases of pneumococcal septicaemia. To the end of November there were 54 cases of pneumococcal septicaemia in 1993 (age range of patients 6 months to 91 years; eight patients died). Three patients had had a splenectomy, in each case over 10 years before their pneumococcal septicaemia; none had received any form of prophylaxis, and two died of fulminating pneumococcal septicaemia. Patients with haematological malignancies accounted for nine of the 54 cases; none of these patients had received pneumococcal vaccine as they did not satisfy current criteria.⁴

Serotyping by the Central Public Health Laboratory at Colindale of 44 of the 54 isolates showed that 93% were of types included in the current pneumococcal vaccine; types 19, 6, 23, 14, and 3 predominated. One patient with myelomatosis had had recurrent pneumococcal septicaemia, in 1989, 1992, and 1993 (untyped, type 22 and type 23 respectively).

Pneumococcal vaccine should be offered to patients in the high risk categories defined by the Department of Health.⁴ Our observations lead us to suggest that to this list should be added patients who have had one episode of pneumococcal septicaemia and selected patients with chronic haematological malignancies despite reports of reduced efficacy of the vaccine in patients with multiple myeloma, Hodgkin's disease, and non-Hodgkin's lymphoma.

Heightened awareness of the dangers of pneumococcal sepsis among both patients and health care workers, enabling earlier admission to hospital of both asplenic and functionally asplenic patients, should lead to a reduction in morbidity and mortality. In common with others,^{5,6} we recommend that high risk patients should also be offered single doses of meningococcal and *Haemophilus influenzae* type b vaccines and be

advised to take prophylactic amoxycillin 250 mg once daily (adult dosage) for life.

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Lifelong penicillin unproved in trials . . .

EDITOR,—The Editor's Choice in the issue of 27 November, which mentions the two articles and editorial on sepsis after splenectomy,^{1,2} highlights the possible medicolegal consequences if the advice given is not followed. We are concerned about the dogmatic nature of some of the recommendations.

We accept that after splenectomy there is a lifelong small risk of serious sepsis. We also accept the value of pneumococcal vaccine, support the recommendation that all patients who have had a splenectomy should be vaccinated, and are persuaded that revaccination every five years is reasonable. But the risk of sepsis is by no means confined to the pneumococcus, as H A Deodhar and colleagues show.² They looked retrospectively at 63 deaths in 184 traceable patients out of 206 who had had a splenectomy. Of 18 who had died of sepsis, only four had had documented pneumococcal infections.

Mary McMullin and George Johnston recommend lifelong prophylactic penicillin.¹ Prophylaxis of this type protects only against pneumococcal sepsis, and only if complied with. It may induce a false sense of security in the patient and the doctor. There has been no prospective randomised trial to assess its value. Indeed, there are several reports of its failure (one of the four deaths due to pneumococcal sepsis reported by Deodhar and colleagues was due to its failure). Although trials have convincingly shown the value of prophylactic penicillin in children under 3 years with sickle cell disease, there are two reasons why these data should not be uncritically extrapolated to all patients who have had a splenectomy.⁴ Firstly, the incidence of pneumococcal infection in children with sickle cell disease is 5.9 per 100 patient years,⁵ which is much higher than the incidence in older patients who have had a splenectomy; secondly, young children with sickle cell disease may still have some functional splenic activity.

Although it would be difficult to carry out, we believe that a prospective study is needed to examine the value of prophylactic penicillin after splenectomy. The rarity of events means that such a study could be conducted only on a national scale. Because of prejudice, randomisation would probably be impossible in such a study, but it

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