should be possible to gather enough data from patients not receiving prophylaxis with penicillin to make the study worth while.

Our policy is to counsel patients (or their parents) on the risks of infection; to give them a card containing information on what to do in case of suspected sepsis; to attempt to follow them up annually; and to provide a course of antibiotics (amoxycillin) for them to keep at home for use at the earliest sign of infection.

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. . . and may be ineffective

EDITOR,—We agree with Mary McMullin and George Johnston that splenectomy causes a slight but important long term susceptibility to (predominantly pneumococcal) sepsis, but we cannot agree with their recommendation for lifelong chemoprophylaxis with phenoxymethylpenicillin or their devaluation of pneumococcal vaccine.[1] A rigid regimen of lifelong chemoprophylaxis is of uncertain value for several reasons, the most pertinent being that the patients do not comply.

Pneumococcal vaccine is the most important component of prophylaxis for people after a splenectomy. There are few data, but the 23 valent vaccine seems to be highly effective,[2] with rare reports of failure of the vaccine. The only clinical situation in which chemoprophylaxis is unavoidable is for infants who have had a splenectomy who are too young to mount a serological response to the vaccine; they should receive formal chemoprophylaxis until capable of mounting a response. With regard to chemoprophylaxis, *Streptococcus pneumoniae* can no longer be regarded as a pathogen with uniformly predictable sensitivities. Pneumococci with reduced susceptibility or resistance to penicillin remain relatively rare in Britain but have been reported to account for 43% of isolates in Spain.[3] Fortunately, 80% of Spanish isolates resistant to penicillin are of serotypes included in the currently licensed 23 valent vaccine. With the expansion of tourism British residents will probably increasingly encounter resistant strains. There has already been a report of invasive disease (meningitis) caused by a pneumococcus resistant to penicillin in a patient taking regular prophylactic ampicillin.[4]

We believe that education of patients or their carers is a far superior prophylaxis to oral medication. In a recent survey of patients' awareness of health precautions after splenectomy only 11% were aware of their increased susceptibility to serious infection.[5]

The important points are as follows. Firstly, pneumococcal vaccine should be given two weeks before splenectomy (if no splenic tissue can be conserved) or postoperatively to patients with trauma. Secondly, patients or parents, or both should be counselled to encourage rapid medical asseessment for suspect infections and, when appropriate, self treatment with antibiotics. Thirdly, prophylactic phenoxymethylpenicillin should be given to children less than 2 years old until a logical response to the vaccines is assured. Finally, *Haemophilus influenzae* type b vaccine should be given to all patients who have not already received it. Improved conjugate pneumococcal vaccines are expected to provide greater protection and make the requirement for reimmunisation clearer.

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Fact sheets, posters, and protocol cards available

EDITOR,—Of the three recent articles on overwhelming infection after splenectomy,[1-3] that by H A Deodhar and colleagues recommends the most active approach.[3] We have already instituted many of these authors' recommendations. Over the past eight weeks 12 000 posters and detailed fact sheets and 30 000 protocol-record cards have been sent to family health services authorities and their equivalents for forwarding to general practitioners. We have not included areas (such as Cornwall) where we know that an effective local initiative has already been launched.

The protocol-record card is perforated for easy separation. The protocol-record fits into the general practice's envelope for the patient's records, and there is an information section the size of a credit card for the patient to keep. The card was subjected to peer review between July and October last year and a pragmatic consensus reached over its advice for doctors and their patients on the risk, prevention, and early management of overwhelming infection after splenectomy.

Any clinician in hospital or general practice who has not received a card can be sent one direct. Production and distribution of the card are supported by a trust fund, but a stamped addressed envelope (A5 or larger) or stamps would be welcome. We acknowledge contributions from Merck, Sharp & Dohme; Merieux UK; and the Alchemy Foundation. Inquiries should be sent to Peter Baddeley.

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Americans recommend additional immunisation

EDITOR,—Mary McMullin and George Johnston rightly emphasise the need for pneumococcal vaccination of patients after splenectomy.[1] In our district such patients are additionally offered vaccination against *Haemophilus influenzae* type b, *Neisseria meningitidis*, and influenza. This is also the recommendation of the American Advisory Committee on Immunization Practices.[2] Despite a lack of documented clinical efficacy the safety of these vaccines weighs heavily in favour of their routine use for asplenic patients.

Patients who have had a splenectomy respond poorly to first generation *H influenzae* type b vaccines made from polyribosylribitol phosphate. However, the second generation vaccine, in which polyribosylribitol phosphate is conjugated to tetanus toxoid, seems to be immunogenic.[3] Meningococcal vaccination after splenectomy for trauma or non-lymphoid tumours produces an antibody response similar to that in healthy control subjects.[4]

Though the Department of Health recommends revaccination with pneumococcal vaccine after five to 10 years,[5] this may change to once every five years if the revised datasheet is approved (personal communication, Merck, Sharpe & Dohme). Such advice would be consistent with the guidance of the American Advisory Committee on Immunization Practices.[2] Recommendations for revaccination with *H influenzae* type b or meningococcal vaccine after splenectomy are not available because of uncertainty over the decay of antibody levels with time. A multicentre follow up study may be required to resolve this issue.

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Hyposplenic patients need prophylactic penicillin

EDITOR,—We welcome the articles highlighting the risk of serious infection in patients who have had a splenectomy,[1-3] but this may be only part of the problem: old age and several disparate diseases are associated with hyposplenism in people with an intact spleen. Functional hyposplenism of this kind also renders patients vulnerable to fulminant sepsis.

For patients with sickle cell disease or thrombocythaemia who have infarction of splenic tissue and patients with infiltrative disease of the spleen the mechanism is easy to understand. In gastrointestinal diseases such as inflammatory bowel, coeliac, and alcoholic liver disease, however, the reason for the hyposplenism is obscure. Overwhelming pneumococcal disease has been recorded in all of these conditions in association with hyposplenism.[4,5] Overwhelming sepsis and disseminated intravascular coagulation have also been reported in hyosplenic patients with ulcerative colitis in the immediate period after colectomy.