



Sara Bird

Failure to vaccinate

Case histories are based on actual medical negligence claims or medicolegal referrals; however certain facts have been omitted or changed by the author to ensure the anonymity of the parties involved.

This article discusses a case involving a patient who died as a result of overwhelming postsplenectomy infection. The case highlights the importance of regular vaccination and education of asplenic patients.

Keywords: medicolegal/jurisprudence, immunisation; preventive medicine



pulse 100/min, BP 100/70 and RR 20/min. There were bilateral chest crepitations. Marked neck stiffness was present. A provisional diagnosis of septicæmia/pneumonia/meningitis was made. After blood was taken for culture, intravenous antibiotic therapy was commenced. About 30 minutes after her initial presentation to the ED, the patient's level of consciousness suddenly deteriorated and she suffered a cardiac arrest. The patient died despite attempts at resuscitation. *Streptococcus pneumoniae* was subsequently isolated from the blood cultures.

The patient's family subsequently commenced legal proceedings against the general practitioner and the hospital. The allegations against the GP included a failure to vaccinate and a delay in the diagnosis of pneumococcal disease. Against the hospital, the claim alleged a failure to vaccinate and the failure to educate and appropriately follow up the patient after her splenectomy.

A review of the patient's hospital and GP records revealed that she had not received pneumococcal polysaccharide vaccine, or any other vaccinations, following her splenectomy.

The claim was ultimately settled out of court. Contribution to the settlement was made on behalf of both the GP and the hospital.

Discussion

The annual incidence of invasive pneumococcal disease in Australia is estimated to be 8–15 per 100 000.¹ The case fatality rate for invasive pneumococcal disease is 12–14%, increasing to 23% in the elderly. The disease is significantly more common in Indigenous Australians. Certain groups are recognised as at increased risk of

Case history

The patient, 42 years of age, presented to the emergency department (ED) complaining of a 2 week history of a dry cough and a 1 day history of fever, vomiting and headache. The patient informed the ED physician that she had three young children who had all been unwell and she thought she may have caught an infection from her children.

The patient had seen her general practitioner 3 days before her presentation to the ED. The GP had made a provisional diagnosis of bronchitis and gave her a prescription for antibiotics in case her condition did not improve. The patient had taken one dose of antibiotic on the day before her presentation to the ED but she had then started vomiting. The patient was on no regular medications. Her past history included a pneumothorax and splenectomy when she was 19 years of age, following a motor vehicle accident. There was no other surgical history. She was a heavy smoker and drinker.

On examination, the patient looked unwell. Her temperature was 39.2,

pneumococcal infection. Those particularly at risk include individuals with anatomical or functional asplenia, lymphoid malignancies, chronic cardiac disease or diabetes mellitus. Smoking is also a strong independent risk factor for pneumococcal disease among immunocompetent, nonelderly adults.

Splenectomy is accompanied by a lifelong risk of acquiring potentially fatal infections, mainly caused by polysaccharide encapsulated bacteria, such as *Streptococcus pneumoniae*. The incidence of postsplenectomy septicaemia and/or meningitis in adults varies from 2.1–7.4% over a 30 year period depending on age at splenectomy, cause of splenectomy and host immunity. Two-thirds of the fatalities in overwhelming postsplenectomy infections occur in individuals less than 50 years of age. Retrospective reviews of patients who have undergone splenectomy suggest that current recommendations regarding vaccination are not being followed.

Risk management strategies

It has been estimated that more than one-quarter of patients who undergo splenectomy do not receive pneumococcal vaccine.^{2,3} It is probable that individuals who underwent splenectomies more than 10–20 years ago are more likely to have missed out on protective measures.

Current recommendations for adult patients who are asplenic include a combination of vaccination and long term antibiotic prophylaxis, plus the supply of emergency antibiotics.⁴ Also, the critical role of patient education regarding the importance of early treatment of infection should not be overlooked. It has been estimated that the risk of overwhelming postsplenectomy infection can be reduced by about half with education, vaccination and antibiotics. Patients and their families should be educated about the possible consequences of splenectomy, including recognising early signs of infection and the need for early presentation for medical care.

Vaccination recommendations include pneumococcal, meningococcal, Hib and influenza immunisations.⁴ The use of spleen registries has also been suggested as an option to ensure adherence with best practice recommendations, including revaccination reminders.⁵

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Conflict of interest: none declared.

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