Stable post-TRUS biopsy sepsis rates and antibiotic resistance over 5 years in patients from Newcastle, New South Wales

To the Editor: Sepsis after transrectal ultrasound (TRUS)-guided prostate biopsy is a potentially serious complication. Antibiotic prophylaxis reduces the risk of sepsis; however, practices are highly variable among urologists.

Several reports show increasing incidence of bacterial resistance in patients with sepsis after TRUS-guided biopsy.[1-3] Preprocedure screening of high-risk patients using cultures from rectal swabs would allow targeted prophylaxis.[4,5] We performed a retrospective audit of all men undergoing a TRUS-guided prostate biopsy by one of nine urologists in Newcastle, New South Wales, to assess the incidence of bacteraemia and changes in antimicrobial susceptibility.

Unique patient data were collected retrospectively from private and public hospital records, including data on positive blood cultures from Hunter Area, Douglass Hanly Moir, Laverty and Healthscope pathology services. Patient and pathology records were cross-referenced and data were analysed using Microsoft Excel. This clinical audit did not require ethics committee approval, in accord with the NSW Health policy on authorisation to commence human research in public health organisations.

From 2008 to 2012, 4218 men underwent a TRUS-guided prostate biopsy. Median age was 64 years. Of these men, 35 (0.8%) developed bacteraemia, with the annual incidence varying between 4/935 (0.4%) and 12/999 (1.2%) over the 5 years (non-significant differences). There were no recorded deaths from sepsis. Most of the cultures from men who developed bacteraemia (29/35) grew *Escherichia coli*. None grew *Enterococcus* species. The isolate cultured was resistant to at least one of the preprocedure prophylactic antibiotics given in 13 out of 35 cases.

Bacteraemia was uncommon, and the rates we found were comparable to previously reported ones.[1,2] Antimicrobial resistance fluctuated (Box) without significant change.

Of note, we found quinolone resistance for cultures from 5/12 patients who developed bacteraemia in 2012. Worldwide emergence of multidrug-resistant *E. coli* sequence type 131 has coincided with a rising incidence of quinolone-resistant infection after TRUS-guided prostate biopsy in New Zealand.[3]

Only five isolates (out of 35) were resistant to both gentamicin and ciprofloxacin, while 12 were resistant to one of these, suggesting that a prophylactic combination remains superior to either agent alone. The low overall incidence of post-TRUS bacteraemia due to a pathogen with resistance to ciprofloxacin and gentamicin (5/4218; 0.1%) implies that there is no utility in screening with cultures from rectal swabs before TRUS biopsy in the population we studied. It remains essential to administer antibiotics prophylactically 1 hour before the procedure and at an appropriate dose to maximise sepsis prevention.

> “It remains essential to administer antibiotics prophylactically”
>
> Mirmilstein et al

George Mirmilstein MB BS(Hons)

John Ferguson DTM&H, FRACP, FRCPA

John Hunter Hospital, Newcastle, NSW.

gmirmilstein@gmail.com

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Competing interests: No relevant disclosures.

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Antibiotic resistance among patients undergoing transrectal ultrasound-guided prostate biopsy who developed bacteraemia (*n* = 35), 2008–2012, Newcastle, New South Wales

Year	No. of patients with bacteraemia	Antibiotic (no. of resistant isolates)					
		Gentamicin	Ciprofloxacin	Ampicillin	Trimethoprim	Cephazolin	Ciprofloxacin + gentamicin
2008	5	2	2	3	2	1	2
2009	8	0	2	6	2	0	0
2010	6	1	0	4	1	2	0
2011	4	1	0	3	1	2	0
2012	12	4	5	11	5	7	3

ultrasound guided prostate biopsy is associated with reduced incidence of postoperative infectious complications and cost of care. *J Urol* 2012; 187: 1275-1279.

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Primary abdominal tuberculosis presenting as chronic dyspepsia

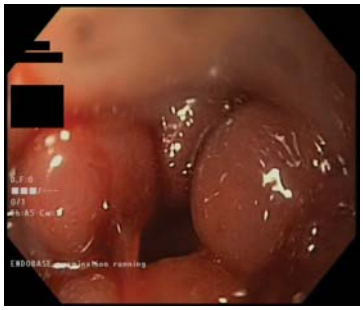
To the Editor: Tuberculosis (TB) continues to be a leading cause of preventable morbidity and mortality worldwide. Although Australia has the lowest rates in the world, more recently there has been a spike secondary to increased international travel and migration.[1]

TB can affect virtually any organ system in the body and can present with atypical or non-specific symptoms. A population-based study in America found that classical symptoms of cough and fever of >2 weeks' duration and weight loss were variably present and were insensitive predictors for TB.[2]

A 51-year-old immunocompetent man who had migrated from Somalia 18 years previously presented with a 6-year history of being treated with proton pump inhibitors for chronic duodenal ulcers. Repeated gastroscopies showed oedematous thickened duodenum. He had a 6-month history of anorexia, nausea, vomiting and weight loss, and was referred for diagnostic laparoscopy for suspected gastrointestinal malignancy.

A computed tomography scan of the abdomen showed small coeliac axis lymph nodes and oedematous thickened duodenum (Box). Gastroscopic biopsy samples over the past 6 years had shown chronic inflammation but no granulomas. Laparoscopy showed florid peritoneal nodules suggestive of miliary TB. A biopsy sample was positive for polymerase chain reaction (Xpert MTB/RIF, Cepheid) and cultures for *Mycobacterium tuberculosis*. The patient was diagnosed with gastrointestinal TB. He responded well to antitubercular treatment.

An endoscopic image showing duodenal mucosal oedema



Gastrointestinal TB is difficult to diagnose. From a review of 23 patients in India, the most common symptoms of duodenal TB were vomiting (14 patients), epigastric pain (13), and weight loss and anorexia (7).[3] Patients with extrapulmonary TB may or may not have concomitant pulmonary TB.[2]

The ileocaecal region is most commonly involved, followed by the colon, jejunum, appendix, duodenum, stomach, sigmoid colon and rectum.[4] Gastroduodenal TB is rare and is often misdiagnosed as peptic ulcer disease. Preoperative endoscopic biopsies have rarely shown underlying aetiology.[3]

Abdominal TB, although uncommon in developed nations, should be suspected in immunocompromised patients or people from highly endemic areas presenting with longstanding non-specific symptoms that do not resolve with standard therapy. Delayed diagnosis can lead to complications such as peritonitis, and intestinal obstruction and perforation. Therefore, early diagnosis and treatment improves patient outcomes without the need for surgical intervention.

Rekha Pai Mangalore MB BS

> "the most common symptoms of duodenal tuberculosis were vomiting, epigastric pain, and weight loss and anorexia"
>
> Pai Mangalore et al

Vivian Liang MB BS

Kalyani Tharmarajah MB BS, BMedSci

The Northern Hospital, Melbourne, VIC.

rekhapai16@yahoo.co.in

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Latent infection in HIV-positive refugees and other immigrants in Australia

To the Editor: Refugees and other immigrants may carry latent infections not endemic to Australia. Immunocompromised people, including those living with HIV, are at particular risk of reactivation of such infections.[1] Screening for schistosomiasis and strongyloidiasis in patients with HIV is not currently recommended by Australian guidelines[2] or the United States guidelines that they reference;[3] however, it is recommended by those of the United Kingdom.[4]

We sought to determine the prevalence of latent tuberculosis (TB), *Schistosoma* spp. and *Strongyloides stercoralis* in a cohort of

people living with HIV attending a tertiary care hospital in Melbourne. The study received approval from our research ethics committee. Between 1 January 1990 and 6 March 2014, a total of 500 patients were under the care of the HIV clinic. These patients were included in a retrospective analysis of data extracted from existing pathology and administrative databases.

Mean age at presentation was 38 years, median length of time attending the clinic was 24.5 months (range, 1–289 months), and 383 patients (77%) were male. Two hundred and twenty patients (44%) were born outside Australia in over 60 different countries. Fifty-eight patients (12%) originated from low-income countries, 106 (21%) from middle-income countries, and 324 (65%) from high-income countries, including Australia.

All patients were included to assess screening for TB in accordance with existing guidelines, which currently recommend screening at diagnosis.[2,3] Only patients from areas endemic for schistosomiasis (> 10% prevalence)[5] were included in the data extraction for schistosomiasis screening. Similarly, only patients from areas endemic for strongyloidiasis (> 20% or unknown prevalence)[6] were included in the data extraction for strongyloidiasis screening.

We also performed a prospective analysis of previously unscreened patients attending the clinic from 7 March to 29 August 2014.

Serological testing comprised QuantiFERON-TB Gold (Cellestis) (Mantoux testing for some patients before 2004), *Schistosoma* IgG indirect haemagglutination assay (ELITech), and *Strongyloides* IgG enzyme immunoassay (DRG Diagnostics).

In the retrospective audit, five of 58 patients who had been screened for schistosomiasis returned positive serology results, indicating past or current infection. In the prospective sample, one of 22 patients was found to have a past or current *Schistosoma* infection that was previously undiagnosed despite the patient originating from an endemic country.

In our retrospective analysis, seven of 83 patients who had been screened for strongyloidiasis returned positive serology results, indicating past or current infection. In the prospective phase, one of 20 patients was found to have a past or current *S. stercoralis* infection that was previously undiagnosed despite the patient having come from an endemic country.

In the retrospective audit, 10 patients were diagnosed with active TB and were excluded from further analysis. TB screening was recorded in 257 of 490 patients (52%); of these, 24 (9%) were positive and 11 (4%) had indeterminate results. In the prospective sample, two of 19 patients not previously screened for TB returned positive results. Both of these patients were born in high-risk countries.

Our results suggest that screening for TB, strongyloidiasis and schistosomiasis should be a part of primary care for HIV-infected patients originating from areas endemic for these infections.

Greta A Gurry[1]

Claire Dendle MB BS, FRACP, GCHPE[2]

Ian J Woolley FRACP, MD, DTMH[2]

1 Monash University, Melbourne, VIC.

2 Monash Medical Centre, Melbourne, VIC.

ian.woolley@monash.edu

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> “screening for TB, strongyloidiasis and schistosomiasis should be a part of primary care”
>
> Gurry et al

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Correction

Incorrect label in graph: In *“Better prevention and management of heart failure in Aboriginal Australians”* in the 16 February 2015 issue of the Journal (*Med J Aust* 2015; 202: 116-117), there was an error in the graph in the Box (*page 117*). The y-axis label should read “Rate/100 000 person-years”.

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Compliance with Australian splenectomy guidelines in patients undergoing post-traumatic splenectomy at a tertiary centre

To the Editor: The lack of a functioning spleen is associated with a lifelong risk of overwhelming post-splenectomy infection (OPSI). Historically, mortality rates associated with OPSI have been in excess of 50%.[1-3] OPSI is a preventable illness through vaccination, education,

Compliance with recommendations in the ASID management guidelines for prevention of sepsis in patients with asplenia or hyposplenia,[4] before and after guideline publication in 2008

Areas of compliance	Number of patients* Preguideline (*n* = 37)	Postguideline (*n* = 42)	*P*
Patient education	8	22	0.08
First vaccination after surgery			
Pneumococcal	34	39	0.87
Meningococcal	34	39	0.87
Haemophilus influenzae type b	34	38	0.82
Influenza	2	5	0.31
Day of first vaccination,† median (range)	7 (– 7 to 44)	7 (1 to 45)	0.47
Prophylactic antibiotic use‡	11	17	0.32
Reserve antibiotic supply	1	5	0.20
Risk-reduction measures			
Patient alerts (eg, bracelet)	1	9	0.04
Splenic salvage	0	0	–
Risk of sepsis included in histology report	0/36	0/42	–
Risk of sepsis reported if Howell-Jolly body seen in peripheral blood smear	0/15	0/19	–
Meningococcal vaccination for travellers to high-risk areas	0	0	–
Informing the patient of malaria risks	1	3	0.61
Informing the patient of *Babesia* risks	0	1	> 0.99
Patient warned of risks associated with animal bites	1	1	–
Spleen registry referral	0	3	0.24

ASID = Australasian Society for Infectious Diseases. * Unless otherwise indicated. † Optimal timing uncertain; ideally 14 days after emergency splenectomy, or earlier if there is a risk of loss of the patient to follow-up. ‡ Amoxicillin 250 mg daily was the most commonly prescribed prophylactic antibiotic, with a variable duration of recommendation (1 year to lifelong). ◆

prophylactic antibiotic use and other measures, as summarised in the national Australasian Society for Infectious Diseases (ASID)-endorsed guidelines for prevention of sepsis in asplenic and hyposplenic patients.[4]

We performed a retrospective cohort study among adult patients who had undergone post-traumatic splenectomy at a tertiary referral centre in Sydney, to assess compliance by health professionals and identify factors that could improve uptake of ASID recommendations. We reviewed hospital medical records and discharge summaries to assess compliance with recommendations before and after the publication of the ASID guidelines.

The Research and Ethics Office of the South Western Sydney Local Health District granted site-specific approval on the basis of low and negligible risk.

A total of 79 patients were identified, 37 in the preguideline group (January 2003 – June 2008) and 42 in the postguideline group (July 2008 – December 2013). Our findings are summarised in the Box.

Overall, compliance with the recommendations was poor, except for the rate of first vaccination against *Streptococcus pneumoniae*, *Neisseria meningitidis* and *Haemophilus influenzae* type b (Box). At discharge, most patients were advised to follow up with their general practitioner; however, GPs were neither provided with the information on the type of vaccination given in the hospital, nor with the appropriate recommendation on follow-up vaccinations.

Our study highlights gaps in best practice and areas for quality improvement and education. Lack of awareness of the guidelines among the surgical teams was found to be a notable factor in the poor compliance with the 2008 ASID guidelines. Asplenia and hyposplenia care should involve a multidisciplinary approach with involvement of surgeons, infectious diseases physicians, haematologists, pharmacists and clinical nurse coordinators.

We recommend the ASID 2008 guidelines be updated, as there have been changes in the vaccination recommendations since publication. A national spleen registry could be considered, for sending vaccination reminders and providing long-term follow-up and ongoing support. This would also allow prospective data collection for assessing compliance and measuring rates of OPSI.

Ravindra Dotel MBBS[1]
Iain B Gosbell FRACP, FRCPA, FASM[1,2]
Ann Hofmeyr MB ChB, FRACP, FRCPA[1]
1 Liverpool Hospital, Sydney, NSW.
2 University of Western Sydney, Sydney, NSW.
r_dotel@yahoo.com

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The G20, human health and sustainability: an interview with Jeffrey D Sachs

To the Editor: Pitney has strongly rebutted the views of Sachs (on development) and the Intergovernmental Panel on Climate Change (on climate science).[1]

While we agree that free speech is vital, we also assert that science, however flawed, is preferable to dogma and opinion, whether held and expressed by followers of Galen, any religion, or a master under whose tutelage someone studied long ago.

Medical science has seen anaesthesia trump physical restraint, hygiene defeat puerperal fever, and the smallpox virus isolated in secure laboratories. We consider that we have an obligation to regard the findings of climate scientists as serious and credible, just as, a priori, we should not dismiss (especially without deep knowledge) the central findings of any sphere of science, medical or otherwise. We accept the principal findings of climate science. While Pitney may have knowledge of the field, his conclusions do not appear to be based on published scientific literature, which is clear.[2]

We feel that it would be impossible to overturn a field that has a well established body of scientific evidence. Our ethical duty, based on our knowledge, is to consider the health implications of climate change, on the assumption that climate scientists are broadly correct.[3] Were we agnostic or sceptical about climate science, we would leave consideration of its health aspects to others.

Pitney's interpretation seems to include the promotion of nuclear power, dams and the continuation of business-as-usual fossil fuel burning, which even the International Energy Agency cautions against.[4] Besides climate protection, local effects such as dust, particulates and volatile organic compounds causing cardiorespiratory illness, and regional effects on farmland and water quality suggest that we should move away from fossil fuels.[5]

The publication of Pitney's letter raises two questions. First, did the editorial team decide that in this case free speech should trump science? Was the letter reviewed? If so, what is the position of the Journal on providing "balance" by publishing the views of vaccination opponents and those sceptical that AIDS is caused by HIV?

Colin D Butler BMed, MSc(Epidemiol), PhD[1,2]
Peter W Tait MB BS, FRACGP, MClimChng[3]
1 University of Canberra, Canberra, ACT.
2 National Centre for Epidemiology and Population Health, Canberra, ACT.
3 Ecology and Environment Special Interest Group, Public Health Association Australia, Canberra, ACT.
aspetert@bigpond.com

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Editor's note: Letters in the Journal are, at present, a mixed bag of comments on articles published in the Journal, short research reports and expressions of opinion. Comments on articles are often referred to the authors of the article that prompted the letter for their response, which is then published. Letters that present research are often sent for review. Letters that are expressions of opinion are not reviewed; their content remains the responsibility of the letter writer. ■

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