

Today, the increased life expectancy of chronic dialysis patients allows HBV to manifest all biological effects it can produce: asymptomatic antigenaemia, cirrhosis, hepatocellular carcinoma and viral reactivation post-renal transplant immunosuppressive therapies. Recently, some studies reported occult HBV infection in haemodialysis patients [4,5]. We would like to communicate our experience about HBV presence among dialysis patients.

From January to May 2005, we screened 101 chronic dialysis patients who were consecutively admitted to the Civic Hospital Palermo, Italy. We did not include individuals with a history of alcohol abuse, illicit drug use, HIV infections or malignancy. Among the subjects examined, 1 was of Black African origin and 1 of Asian ethnicity; 99 were from Sicily; none had previous renal transplant or immunosuppressive therapy; 58 were males and 43 females with a mean age of 51 years. The major causes of IRC were diabetes mellitus and hypertension; 75 patients underwent haemodialysis and 26 peritoneal dialysis. The mean time on dialysis was 28 months. We identified four HBsAg-positive and DNA-HBV-positive patients (from 6–170 000 UI/ml). We found 97 HBsAg-negative patients: among these subjects, 22 were vaccinated for HBV infection, 29 were non-vaccinated and 46 had natural HBV infection; 79 were HCV negative and 18 HCV positive; in these patients, hepatic function tests always showed normal values. There were no echographic signs of liver disease. Among the HBV-negative patients, the DNA-HBV detection was always negative. In our experience, no occult HBV infection was found in the 97 HBsAg-negative patients. Nowadays, we would not recommend DNA-HBV screening as a routine virological control in dialysis services. Instead, we suggest DNA-HBV screening for patients on the kidney transplant waiting list and in patients with abnormal liver function tests.

Conflict of interest statement. None declared.

Department of Nephrology and
Dialysis, ARNAS Civico and
Benfratelli, Palermo, Italy
E-mail: gioacchinolicavoli@libero.it

Gioacchino Li
Cavoli
Angelo Ferrantelli
Angelo Tralongo
Onofrio Schillaci
Ugo Rotolo

1. Manzini P, Giroto M, Barsotti R *et al.* Italian blood donors with HBcAb and occult HBV infection. *Haematologica* 2007; 92: 1664–1670.
2. Goodkin A, Young WE, Kurokawa K *et al.* Mortality among hemodialysis patients in Europe, Japan and the USA: case-mix effects. *AJKD* 2004; 44: S16–S21.
3. Pontoriero G, Santoro D, Messina A *et al.* Lo Studio DOPPS: risultati della coorte italiana. *G Ital Nephrol* 2005; 22: 494–502.
4. Stratta P, Bruschetta E, Minisini R *et al.* Prevalence and clinical relevance of occult HBV infection in patients on the waiting list for kidney transplant. *Transplant Proc* 2009; 41: 1132–1137.
5. Di Stefano M, Volpe A, Stallone G. Occult HBV infection in hemodialysis setting is marked by presence of isolated autoantibodies to HBcAg and HCV. *J Nephrol* 2009; 22: 381–386.

doi: 10.1093/ndtplus/sfp122

Advance Access publication 25 September 2009

Thalidomide-induced heart block in a dialysis patient

Sir,

We report the case of a patient with thalidomide-induced third-degree heart block when used in context of myeloma and acute renal failure. An 88-year-old female patient was commenced on thalidomide 50 mg daily along with pulsed dexamethasone for treatment of newly diagnosed multiple myeloma. After 3 weeks of treatment, the dose of thalidomide was increased to 100 mg daily. Electrocardiogram (ECG) at baseline presentation and on 50 mg od showed normal sinus rhythm with a ventricular rate of 83/min. There was no evidence of delayed atrioventricular conduction (PR interval 130 ms) and normal QRS. After 3 days of 100 mg thalidomide, the patient started feeling light-headed on minimal exertion. A repeat ECG showed third-degree heart block with a ventricular rate of 31 beats per minute and left bundle block.

The patient had no history of ischaemic heart disease. Serum electrolytes, thyroid function tests, cardiac enzymes and chest x-ray were within normal limits. We observed this patient for 24 h, and the ECG abnormality did not improve. After counselling about the need for ongoing treatment with thalidomide treatment for her myeloma and the risks of infections with a permanent pacemaker, she went on to have a permanent pacemaker fitted.

Due to its anti-angiogenesis activity thalidomide has been used for the treatment of multiple myeloma. The combination of thalidomide and dexamethasone, often in combination with cyclophosphamide, is now one of the most common regimens for patients with newly diagnosed multiple myeloma [1].

As thalidomide predominately undergoes pH-dependent spontaneous hydrolysis in all body fluids into multiple metabolites and is passively excreted, its pharmacokinetics are not expected to change in patients with impaired liver or kidney function. Hence, no dose reduction is recommended for patients with renal impairment or those on dialysis.

Thalidomide has a number of well-recognized side effects such as teratogenicity, skin rash, peripheral neuropathy, pneumonitis and venous thromboembolism (VTE). However, the incidence of heart block has been rarely reported. There have been similar case reports of conduction abnormalities with thalidomide [2].

We conclude that cardiac monitoring should be instituted and screened for when treating patients with this drug. Regular ECGs should be performed when rate disturbance is noted on this therapy.

Conflict of interest statement. None declared.

Department of Renal Medicine
Sussex Kidney Unit, Brighton, UK
E-mail: anwarsid@doctors.org.uk

Siddiq Anwar
Kunal Chawathey
Steve Holt

1. Kyriakou C, Thomson K, D'Sa S *et al.* Low-dose thalidomide in combination with oral weekly cyclophosphamide and pulsed dexamethasone is a well tolerated and effective regimen in patients with relapsed and refractory multiple myeloma. *Br J Haematol* 2005; 129: 763–770
2. Hinterseer M, Becker A, Kääh S *et al.* Thalidomide-induced symptomatic third-degree atrioventricular block. *Clin Res Cardiol* 2006; 95: 474–476

doi: 10.1093/ndtplus/sfp107

Advance Access publication 1 August 2009

Adherence to guideline recommendations for infection prophylaxis in peritoneal dialysis patients

Sir,

As compared to the patients on haemodialysis, those on peritoneal dialysis (PD) are at increased risk of dying from infections [1]. Catheter-related infections in PD increase the risk of subsequent peritonitis, catheter removal, technique failures and infectious deaths. Based on level II evidence from one randomized controlled trial, the Caring for Australasians with Renal Insufficiency (CARI) Guidelines recommend intranasal mupirocin prophylaxis for PD patients with nasal *Staphylococcus aureus* carriage to reduce the risk of PD-associated infections [2,3]. However, it is not known how well these guidelines have been implemented into clinical practice.

The Australasian Kidney Trials Network is currently conducting a trial of exit-site application of antibacterial honey (Medihoney™) for the prevention of catheter-associated infections in PD (the HONEYPOT study) [4]. A prospective survey of exit-site care in PD units interested in participating in the HONEYPOT study was performed to facilitate the study design and methodology.

Thirty of 61 (49.2%) PD units providing care to 65.7% of all PD patients in Australia and New Zealand responded to the survey questionnaire. Thirteen units were of moderate size (20–50 patients), and 9 were larger units with >100 patients. Fourteen (47%) units had no fixed policy for using prophylaxis against ESI. Thirteen (43%) units routinely screened PD patients to identify nasal carriers of *S. aureus* (Table 1). Only three (10%) units routinely prescribed prophylaxis to all patients. Twelve (40%) and 5 (17%) units prescribed nasal and topical exit-site mupirocin, respectively (Table 2). Four units prescribed either nasal or topical mupirocin and 1 unit prescribed nasal chloramphenicol. Ten (33%) units recommended daily exit-site cleaning with 2% chlorhexidine. Only 13 (43%) units followed the standard practice of using a premoistened nasal swab incubating it in enrichment nutrient broth for 24 h before plating onto solid media [5].

The results of this survey highlight poor adherence to the national guidelines (CARI) and the absence of a uniform, standard practice of exit-site care. Failure to follow appropriate procedures for screening *S. aureus* carriage may result in poor detection rates. Very few centres routinely prescribed prophylaxis to all patients, probably due to concern about mupirocin resistance. Although we did not explore the causes of poor adherence to the guidelines, the absence

Table 1. Prophylaxis against exit-site infections

| | Number of centres (%) |
|--|-----------------------|
| Routinely prescribe prophylaxis to all patients | 3 (10) |
| All patients are screened to identify nasal carriers of <i>S. aureus</i> | 13 (43%) |
| No fixed policy | 14 (47%) |

Table 2. Choice of prophylaxis

| Prophylaxis | Number of centres (%) |
|-------------------------------|-----------------------|
| Nasal mupirocin | 12 (40%) |
| Topical (exit-site) mupirocin | 5 (17%) |
| Nasal or topical mupirocin | 4 (13%) |
| No fixed policy | 7 (24%) |
| Others | 1 (3%) |
| No response | 1 (3%) |

of level I evidence could be a major reason. The other major limitations of this survey are poor response rates, and possibility of a recall bias. The survey was not designed to perform a formal clinical audit.

Further attention to enhancing continuous quality improvement in PD via developing effective strategies for implementation of best-practice nephrology guidelines and conducting regular practice audits is recommended.

Conflict of interest statement. D.W.J. has received consultancy fees, research grants and speakers' honoraria from Baxter Healthcare; and speakers' honoraria and research grants from Fresenius.

¹Australasian Kidney Trials Network

²Department of Nephrology Princess Alexandra Hospital

³School of Medicine

⁴School of Population Health University of Queensland, Brisbane Australia

E-mail: Sunil_Badve@health.qld.gov.au

Sunil V. Badve^{1,2,3}

Alicia Smith^{1,4}

Carmel M.

Hawley^{1,2,4}

David W.

Johnson^{1,2,3,4}

1. Johnson DW, Dent H, Hawley CM *et al.* Associations of dialysis modality and infectious mortality in incident dialysis patients in Australia and New Zealand. *Am J Kidney Dis* 2009; 53: 290–297
2. Mupirocin Study Group. Nasal mupirocin prevents *Staphylococcus aureus* exit-site infection during peritoneal dialysis. *J Am Soc Nephrol* 1996; 7: 2403–2408
3. The CARI Guidelines. Evidence for peritonitis treatment and prophylaxis: prophylaxis for exit site/tunnel infections using mupirocin. *Nephrology (Carlton)* 2004; 9(Suppl 3): S86–S90
4. Johnson DW, Clark C, Isbel NM *et al.* The HONEYPOT Study Protocol: a randomized controlled trial of exit-site application of Medihoney antibacterial wound gel for the prevention of catheter-associated infections in peritoneal dialysis patients. *Perit Dial Int* 2009; 29: 303–309.
5. Thomson R, Miller J. Specimen collection, transport, and processing: bacteriology. In Murray P, Barron E, Pfaller M, Jorgensen J, Tenover R (eds). *Manual of Clinical Microbiology*, 8th edn. Washington, DC: American Society for Microbiology, 2003, pp. 286–329

doi: 10.1093/ndtplus/sfp095