"New recommendations in the treatment of Gram-positive bacteraemia in dialysis patients"

Labriola, Laura ; Jadoul, Michel
patients. The literature of the last few years offers convincing information that supports this opinion, both in patients with normal kidney function [1] and in haemodialysis patients [2].

So we were not surprised to learn that a second treatment course with a higher RBV dose in one of the two patients that failed a sustained viral response in our pilot study was as yet effective.

At the time that the guidelines for our pilot study were settled and placed on the website of the Dutch Federation of Nephrology (NFN) only scarce information was available concerning the use of RBV in renal insufficiency. It was even considered to be contraindicated. Partly based on earlier experience [3] we were convinced that RBV could be used in a safe and possibly effective way if the dosage could be guided by plasma trough level determinations aiming at a so-called therapeutic range (1.5–2.5 µg/ml). This range was defined on the available experimental information at that moment but there was no firm proof of the clinical efficacy. To start a pilot study we had to be very careful and made a choice for a relative low dose.

To prevent serious haemolytic anaemia— the most important complication of RBV—a high dose of erythropoietin (Epo) is necessary in the treatment of dialysis patients. A dose of 30 000–40 000 IU/week was permitted in the studies of Rendina [2] and Bruchfeld [4] and also in our study, but the mean dose remained limited to 19 000 IU/week in the last one.

During the first 12 weeks of our study the RBV plasma level was often low despite small increases of the dose. Based on this experience we will advocate now a higher starting dose of 300 mg/day, preceded by a much more generous use of Epo.

Plasma level monitoring of RBV promotes safety and helps to guide the dosing of RBV.

Future results will possibly help to define an optimal therapeutic range. A higher RBV dose is necessary to achieve therapeutic level. A higher RBV dose is necessary to achieve a higher RBV dose is necessary to achieve a therapeutic level that helps to guide the dosing of RBV.

We believe that our pilot study has contributed to the effective treatment of hepatitis C-infected vulnerable dialysis patients.

Conflict of interest statement. None declared.
Finally, the author did not mention thrombocytopenia as a side effect of vancomycin [1]. Recently, Von Drygalski et al. reported thrombocytopenia due to vancomycin-dependent antiplatelet antibodies in 34 patients. [5]. Thus thrombocytopenia should be considered as a potential side effect of vancomycin, like cutaneous reactions, neutropenia and hepatotoxicity.

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Reply

Sir,

In response to the kind letter of Dr Labriola et al., I would like to specify the following points:

(a) The aim of my editorial was to illustrate the new recommendations for Gram-positive bacteraemia. This is why I did not review the wide literature devoted to the empiric antibiotic administration. On the other hand, it should be pointed out that such therapy remains empiric by definition and the choice of broad spectrum antibiotics widely ranges among different countries.

(b) Dr Labriola et al. attribute the low incidence of MRSA bacteraemia observed in their dialysis unit to the use of cefazolin. Actually, cefalosporins proved to be effective in preventing Gram-positive infection. The problem is that in the last 20 years many strains of Enterococci and Staphylococci acquired resistance to these antimicrobial agents [1]. Thus, the good results obtained in Louvain cannot necessarily be repeated in other dialysis units.

(c) As pointed out in my editorial, I fully agree with the importance of hygienic preventive measures. However, whether antibiotic lock therapy may be helpful for preventing catheter infection is still disputed. Even the meta-analysis of Dr Labriola et al., unfortunately available at present only in the form of abstract [2], does not seem to allow firm conclusions. In their analysis, the authors could not find differences in catheter infection between patients assigned to antibiotic lock therapy and untreated controls. However, they reported that gentamycin-containing lock solutions significantly reduced the risk of catheter-related bacteraemia. Thus, the choice of the antibiotic can influence the efficacy of antibiotic lock therapy. At any rate, I recommended a word of caution with antibiotic lock therapy as this preventive treatment may theoretically favour resistance.

(d) I have not reported an uncommon side effect of vancomycin, namely thrombocytopenia. Cases of thrombocytopenia have been described and it has been shown that they may be related to anti-platelets antibodies by Von Drygalski et al. [3]. It should be noted, however, that during a period of 5 years only 34 serum samples from patients in several parts of the United States in whom vancomycin-induced thrombocytopenia was suspected were referred to the Platelet and Neutrophil Immunology Laboratory at the Blood Center of Wisconsin (Milwaukee) to be tested for vancomycin-dependent antibodies. It was out of the scope of the editorial to describe the many side effects that may occur with vancomycin (other adverse events were also not mentioned, i.e. rash; hives; itching; difficulty breathing; tightness in the chest; swelling of the mouth, face, lips, or tongue; bloody stools; chest pain; decrease in the frequency of urination or in the amount of urine; fever, chills, or sore throat; flushing; irritation, pain, or swelling at the injection site; numbness of an arm or leg; red, swollen, or blistered skin; severe diarrhoea; severe stomach pain; sudden leg pain; sudden severe dizziness, nausea, headache, or vomiting; sudden shortness of breath; unusual bruising or bleeding and wheezing). I simply intended to outline the most frequent and severe side effects, which may render difficult the use of this important antibiotic in dialysis patients.

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2. Labriola L, Crott R, Jadoul M. Preventing haemodialysis catheter-related bacteraemia with an antimicrobial lock solution: a meta-analysis