Differences in burnout between Northern and Southern Italian dialysis health-care providers

Sir,
I have read with interest the excellent paper by Klersy et al., examining burnout in dialysis health care providers [1]. Although several studies have shown that 25–30% of health-care professionals develop burnout symptoms as a consequence of their clinical activities, little data are currently available on burnout rates in dialysis health-care workers.

Klersy et al. [1] compared burnout levels in 344 nurses and physicians working in dialysis units in Northern Italy, and investigated the relationship between burnout and quality of life in their cross-sectional observational study. They concluded that 'nurses and physicians working in dialysis units had burnout and quality of life scores comparable to those of their reference populations. Particularly, nurses appeared more burned-out on the emotional exhaustion scale than physicians, probably due to the different intensity and duration of the patient–health care provider relationship. In addition, working condition and personal situation were also associated to burnout.'

Burnout is a syndrome characterized by the three main components of emotional exhaustion, by lack of empathy with patients and colleagues and by diminished personal accomplishment, all of which lead to decreased effectiveness at work [1].

We performed a study in which we analysed burnout in health-care workers from Southern Italian dialysis units. Our study was conducted in 298 subjects, comprising 72 doctors (D) (24.2%) and 226 nurses (N) (75.8%), working in 58 dialysis units in Southern Italy [2]. We sent questionnaires examining personal data as well as six basic work-related areas, to several Italian dialysis centres. Items included in the questionnaire were:

1. Personal data
2. Work environment (seven items)
3. Work instrumental (six items)
4. Environment (six items)
5. Knowledge of objectives (four items)
6. Care quality (five items)
7. Motivations to work (six items)

Our health-care workers were guaranteed complete anonymity to avoid any bias in their responses and to ensure that participants answered on the basis of their actual convictions. The questionnaire was set out according to a five-point scale, in which a score of 1 emphasized an entirely negative judgment and 5 was entirely positive. In addition to the overall analysis, we assessed answers from single dialysis units. Results were also analysed according to professional category. The questionnaire was modelled for the Laboratory Medicine Service, verified by the Italian Society of VRQ and adapted for dialysis units [3].

The median age of participants was 50 years for D and 37 years for N (P < 0.001); median time on the job was of 10.22 years for D and 6.18 years for N (P < 0.001). Male were 61% for D and 38% for N. The data showed that 39% of D and 27% of N were very critical with respect to the analysed items. We found that a greater percentage of N than D were negative about environmental climate, the objectives and the quality of services. The female N gave more negative responses across all items than male N. For D, there were no differences according to gender. Workers’ age showed a linear inverse correlation with score, while the number of years on the job was not related to score.

Our results agree with the conclusion of Klersy et al. [1]. In agreement with their findings, our population of dialysis workers was able to maintain higher levels of empathy with their patients and more satisfying feelings of personal accomplishment; both these factors are determinant features of good patient–physician and patient–nurse relationships. Our data also agree with the conclusion of Arikan et al. [4], indicating that dialysis nurses have less work stress and burnout and higher work satisfaction scores than nurses from intensive care units and ward nurses.

Because there are more profit dialysis units in Southern than in Northern Italy [5], we analysed our scores to compare profit and non-profit dialysis units, and were surprised to find that profit-dialysis health-care workers gave lower scores than non-profit-dialysis workers (Figure 1). In fact, profit-dialysis workers gave significantly lower scores for work environment (WE), work instrumental (WI) and environment (En) compared to non-profit workers. Figure 1 also shows that the ratio of percent scores from non-profit over profit-dialysis units for WE, WI and CE was higher (3.9, 3.4 and 4.9 times, respectively; Figure 1), whereas the capacity of quality assistance and improved professional interactions in their work places were similar.

In conclusion, burnout in health-care professionals represents a dangerous form of work failure because work stress...
and burnout appear to exert significant influences in patients and their families.

Conflict of interest statement. None declared.

SOC Nefrologia, ASL AV/2, PO “A Landolfi”, Solofra (AV), Italy
Biagio Di Iorio
Emanuele Cucinelli
Vincenzo Bellizzi
E-mail: br.diorio@libero.it

doi:10.1093/ndt/gfm737

Advance Access publication 28 November 2007
See http://ndtplus.oxfordjournals.org/

Unusual saprophytic bacterial infection as emerging opportunistic pathogens in kidney transplantation

Sir,
A 33-year-old man underwent cadaver renal transplantation for polycystic kidney disease. Immunosuppression consisted of basiliximab, tacrolimus, mycophenolic acid (MA) and steroids. Resumption of kidney function was immediate, and the patient was discharged on Day 11. On Day 75, white blood cell (WBC) count dropped to 1640 cells/ml. Viral infections being ruled out, all myelotoxic drugs but tacrolimus were withdrawn. Tacrolimus was stopped when WBC count further dropped to 280 cells/ml on Day 78. Filgrastim was successfully given. The patient became febrile on Day 80. Blood, urines, sputum and bronco-alveolar lavage were unsuccessfully screened for infections. On Day 83, the patient developed dyspnoea due to massive left pleural effusion. Pleural liquid was collected and cultured several times. Finally, incubation of samples in Bact Alert 3D showed positive growth in anaerobic conditions after 7 days, but subcultures on Shaedler agar failed in obtaining any growth. Only subcultures, on pre-reduced Columbia blood agar plates adequately supplemented, showed very small colonies of irregularly Gram-stained anaerobic rods, whose identification was possible by universal 16S rRNA PCR using the following broad range primers: u3(AACT(C/A)
45–30
1C223
TGGATCCA(G/A)CCGCA(G/C)(G/C) TTC [1]. The 1000-bp sequence was aligned and compared with all eubacterial 16S rRNA gene sequences available in the GenBank database (http://www.ncbi.nlm.nih.gov) [2]. A 100% similarity was obtained with Eubacterium plautii (EP) strain CCUG 28093 16S rRNA gene sequence (GenBank/EMBL accession no. AY724678). Unfortunately, the identification of the germ was obtained after the patient had already been discharged. In the long run, the withdrawal of tacrolimus and MA triggered a rejecting process leading to irreversible renal failure and graft was removed on Day 123.

This is the very first case of EP infections in a transplant patient and the second ever in humans [3]. EP is characterized by an extremely slow and minimal growth on the media commonly used in clinical microbiology laboratories, which renders its identification fastidiously and is rarely available. Prolonged incubation of plates and broth and use of enriched media are key factors for successful diagnosis. However, the time and effort required for isolation and identification means that, in many instances, no attempt in isolation is made and even if isolated, identification is problematic, for which we should assume that these isolates are often—if not regularly—missed [4]. Recently, molecular biological techniques—such as sequence analysis of clone libraries from amplified ribosomal DNA and denaturing or temperature-gradient gel electrophoresis—have been increasingly applied to study the complexity of resident microbial communities and have demonstrated the enormous diversity of commensal intestinal species. In our setting, analysis of the 16S rRNA sequence of the organism provided a reliable and straightforward identification tool and the routine use of this method should increase our knowledge of the clinical spectrum of this rare infection in humans.

Acknowledgements. We are indebted to Miss Wendy Batten for editorial services.

Conflict of interest statement. None declared.

1Transplant Unit, San Salvatore Hospital, University of L’Aquila, Italy
2Department of Infectious, Parasitic and Immune-mediated Diseases, Istituto Superiore di Sanità, Roma, Italy
3Department of Internal Medicine, Chair of Hematology, University of L’Aquila, Italy
E-mail: giuseppe_ornoio@hotmail.com

doi:10.1093/ndt/gfm677

© The Author [2007]. Published by Oxford University Press on behalf of ERA-EDTA. All rights reserved.
For Permissions, please email: journals.permissions@oxfordjournals.org