agonists mediate coronary vasoconstriction, adenosine, ATP-dependent K+-channels, endothelium-derived hyperpolarizing factor and β-adrenoeceptors agonists cause coronary vasodilatation [5]. Likewise, there are several factors such as adenosine diphosphate, thromboxane A2, thrombin, epinephrine, collagen and platelet activating factor which provoke platelet activation and adhesion and prostacycline as a second major inhibitor of platelet adhesion [6]. Additionally, the reduction of NO by itself does not induce spontaneous platelet aggregation but requires prior platelet activation by cofactors as a prerequisite. Thus, the effect of absent NO remains speculative, provides only limited explanation and these other pathways described need to be taken into account. Finally, TTP and TMA are characterized by severe injury and activation of the vascular endothelium that in all likelihood will result in the release of most of these factors favouring microvascular coronary thrombosis [4].

The intriguing idea to administer NO donors as nitrates to patients with TTP certainly deserves to be studied. As no data exist on the effect of NO donation in TTP, detailed studies are required. However, we caution against applying nitrates at present outside of any trial, as TTP may induce sudden haemodynamic shock and multiorgan failure, life-threatening situations which may be aggravated by the use of nitrates.

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Sleep quality and dialysis efficacy affect functional capacity in patients receiving haemodialysis therapy

Sir,

Recently Chan et al. published a very interesting article dealing with the effect of nocturnal home haemodialysis (HD) therapy on exercise capacity [1]. The authors investigated 13 patients switching from conventional HD to a home-based—almost daily—nocturnal HD, and showed that the enhanced control of uraemia achieved by nocturnal dialysis significantly increases exercise capacity and duration. These results, apart from being very promising in the area of physical rehabilitation of HD patients, underscore the central pathogenetic role of uraemia in muscle atrophy and exercise intolerance, which in turn lead to reduced physical activity and compromised quality of life of HD patients [2].

In addition, sleep disorders, which are highly prevalent in HD patients, are probably also due to uraemia-related factors, since substantial improvement occurs after switching to nocturnal dialysis [3] or after renal transplantation [4].

In a recent issue of your journal, our group presented data showing that HD patients with sleep apnoea disorders demonstrated poorer physical and functional capacity compared to that of non-apneic counterparts [5]. In that study, six different established tests were used for the assessment of physical functioning while a full-night sleep polysomnography was used to assess sleep quality and quantity. The study concluded that the lack of restorative sleep due to sleep apnoea-hypopnoea syndrome (arousal index = 40 events/h) might have independently augmented the uraemia-induced deterioration of functional capacity in HD patients.

From the above it is therefore clear that sleep quality and functional capacity are closely related in HD patients, similar to other patients with chronic disease. Sleep was not investigated in the study by Chan et al. [1]; nevertheless, it is conceivable to conclude that the improvement in exercise duration and capacity found might have been also related to the improvement in sleep quality and quantity secondary to the enhanced uraemic control.

Finally, sleep quality seems to play an important role in the life of HD patients, affecting functional capacity and health status. It remains to be seen whether direct or indirect means of improving sleep in HD patients would also improve mortality and morbidity.

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Sir,
We thank Dr Sakkas and colleagues for their interest in our recent article demonstrating the impact of nocturnal home haemodialysis on exercise capacity and duration [1]. We agree with Sakkas et al. that exercise intolerance as exhibited by patients with end-stage renal disease (ESRD) is likely to be multifactorial [2,3].

Excessive daytime sleep and sleep disorders, including sleep apnoea syndrome, occur with increased frequency in patients with ESRD [4]. Although the exact contribution of sleep disorders, particularly sleep apnoea syndrome, on physical intolerance is unknown in ESRD, as similar observations were made with patients with heart failure and central sleep apnoea treated with continuous positive airway pressure [5].

To date, there is an emerging body of literature indicating the effect of intensive haemodialysis on various surrogate outcomes. The ultimate impact of nocturnal haemodialysis on the mortality of ESRD patients remained to be clarified.

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Acute kidney injury due to deferoxamine in a renal transplant patient

Sir,
We have served as members of the Renal Safety Board for deferasirox (Exjade®, ICL670) for the past 5 years and wish to respond to a misleading comment on the renal safety profile of deferasirox that appears in the discussion section of a recent article by Clajus et al. [1], which describes a case report of acute kidney injury due to deferoxamine. The authors state that deferasirox has ‘been repeatedly shown to cause acute renal failure’, citing a recent article by Kontoghiorges [2].

It should be pointed out that Kontoghiorges bases many of his conclusions about the tolerability of deferasirox on post-marketing surveillance information. Such events are reported in the drug label irrespective of whether a causal link has been established. More than 30 000 patients have been treated with deferasirox outside the clinical trial setting, many of whom were elderly or had other underlying medical conditions in addition to transfusional iron overload. Although acute renal failure was reported in a very small number of patients receiving deferasirox, almost all of these patients had severe complications of their underlying haematological disease, most commonly sepsis, and the contribution of deferasirox to the renal insufficiency in these critically ill patients is quite uncertain. Having reviewed many of these cases in detail, we are very skeptical that deferasirox was responsible for the episodes of renal failure. In addition, the term ‘acute renal failure’ was probably used inappropriately in many cases to describe relatively minor increases in serum creatinine (<2× upper limit of normal) that developed over the course of several weeks.

Conflict of interest statement. None declared.