Ageing: A Possible Clue to the Arrhythmogenic Effect of Hemodialysis

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Dear Sir,

Following the interesting letter by Quereda et al. [1], we analyzed the Holter recordings of 20 uremic patients in order to assess the relation, if any, between hemodialysis (HD) and arrhythmias. A significant arrhythmogenic effect of HD was demonstrated, but it lasted for only 2 h after completing HD (fig. 1). Six patients with arrhythmias exceeding the IIB class of Myerburg [2] (1–9 polyfocal ventricular ectopic beats per hour) were particularly vulnerable to the arrhythmogenic effect of HD. Interestingly, only the mean age distinguished these patients from the remaining 14 (65.4 ± 9.2 vs. 53.6 ± 2.1 years; $p < 0.05$). In fact, no further difference between groups was found in sex distribution, smoking habits, serum lipids, drug consumption, etiology of the chronic renal failure, duration of the HD treatment, pre-HD blood chemistry and HD-related changes including ionized calcium, incidence of diabetes, hypertension, and coronary artery disease (as evaluated by history, basal and effort electrocardiogram, and echocardiogram). We conclude that HD may be regarded as an arrhythmogenic procedure, mostly in the elderly. Accordingly, the mean age should always be taken into account when comparing results on this subject.

References

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Pre-HD	HD	Post-HD
Hours 0–2	2–6	6–8 8–10 and subsequent
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–2.48*		