**LETTERS TO THE EDITOR**

**“Malignant” Intradialytic Hypertension: A Severe Form of Intradialytic Hypertension**

To the Editor:

I read with interest the review by Dr Inrig regarding intradialytic hypertension.1 However, I would like to highlight some rare cases (4 cases during 20 years of experience) of a more severe or “malignant” form of intradialytic hypertension, where blood pressure (BP) rose to dramatic levels (systolic BP >230 mm Hg, or diastolic BP >130 mm Hg) with severe headache or vomiting following the first hours of a hemodialysis (HD) session. These patients did not respond to any antihypertensive medication but presented a reduction of BP when the HD session was terminated prematurely. All these patients were receiving antihypertensive medications and had no overt edema as described by Inrig.2 We treated them by an intensified ultrafiltration protocol, either by daily HD, or by alternate-day HD and isolated ultrafiltration sessions, as suggested by Cirit et al.3

Dry weight was reduced significantly (5-7 kg) during a period of 1-2 weeks and all became normotensive. The rise in BP was less dramatic during the isolated ultrafiltration sessions, indicating a possible pathogenic role of a dialysate component (sodium in our opinion). The “malignant” phase during an ordinary HD session was treated by switching to isolated ultrafiltration for 10-20 minutes, without terminating the session.

In cases of intradialytic hypertension, we should strive to readjust dry weight, and in cases of “resistance,” we ought to use our most ancient but powerful weapon against hypertension, isolated ultrafiltration, in order to remove more salt and fluids from our patients.

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**References**

7. Inrig JK, Patel UD, Toto RD, Szzech LA. Association of blood pressure increases during hemodialysis with 2-year

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**In Reply To “Malignant” Intradialytic Hypertension: A Severe Form of Intradialytic Hypertension’**

I thank Dr Fourtounas for sharing his personal cases of “malignant” intradialytic hypertension.1 His experiences highlight the importance of clinically silent volume overload contributing to the pathogenesis of intradialytic hypertension in select patients. Of interest is the finding that isolated ultrafiltration was associated with a less dramatic increase in blood pressure in these individuals and suggests the dialysate prescription partially contributed to the development of intradialytic hypertension. If these patients had excess free water and low predialysis sodium levels, exposing them to a standard dialysate sodium of 140 mEq/L could result in sodium loading during the initial dialysis treatment. As demonstrated in vitro by Oberleithner et al, increases in plasma sodium in the presence of aldosterone can acutely cause endothelial cell stiffness with impaired release of nitric oxide which in turn could result in vasoconstriction and increased blood pressure.2 Therefore, while I concur with the recommendation to challenge dry weight in patients with intradialytic hypertension, I would also propose adjusting the dialysate sodium concentration to more closely match the patient’s predialysis sodium to avoid salt loading during hemodialysis.

Considering our work has demonstrated an increase in blood pressure during hemodialysis is independently associated with higher hospitalization rates and higher mortality, intradialytic hypertension should not be ignored.3-5 Appropriate management strategies include judicious attention to dry weight, avoidance of dialyzable antihypertensive medications, limiting the use of high-calcium dialysate, achieving adequate sodium solute removal during hemodialysis, and using medications that inhibit the renin-angiotensin-aldosterone system or improve endothelial cell function.6

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**References**

4. Inrig JK, Patel UD, Toto RD, Szzech LA. Association of blood pressure increases during hemodialysis with 2-year