Role of blood pressure monitoring to determine optimal body weight of hyperhydrated acute patients

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Introduction

The survival of dialysis patients is significantly influenced by the correct adjustment of the fluid balance. To treat overhydration, the proper determination of dry weight is required which is essential for monitoring the blood pressure in addition to the physical assessment.

Objective

To monitor the blood pressure, ultrafiltration and body weight during the treatment of patients with acute kidney injury.

Methods

During the period under review (01.01.2018 – 30.09.2018), 66 patients started acute therapy. 23 patients presented signs of hyperhydration in addition to renal insufficiency. We aimed for gradual body weight reduction with close blood pressure control for these patients. 43 patients dropped out from the haemodialysis program (because of recovered kidney function, death, or moving to other dialysis centres). We evaluated the patients' ultrafiltration, decreasing of body weight, changing of blood pressure during 12 treatments on average. At the same time, we started the patients' education, focusing on fluid balance and medications.

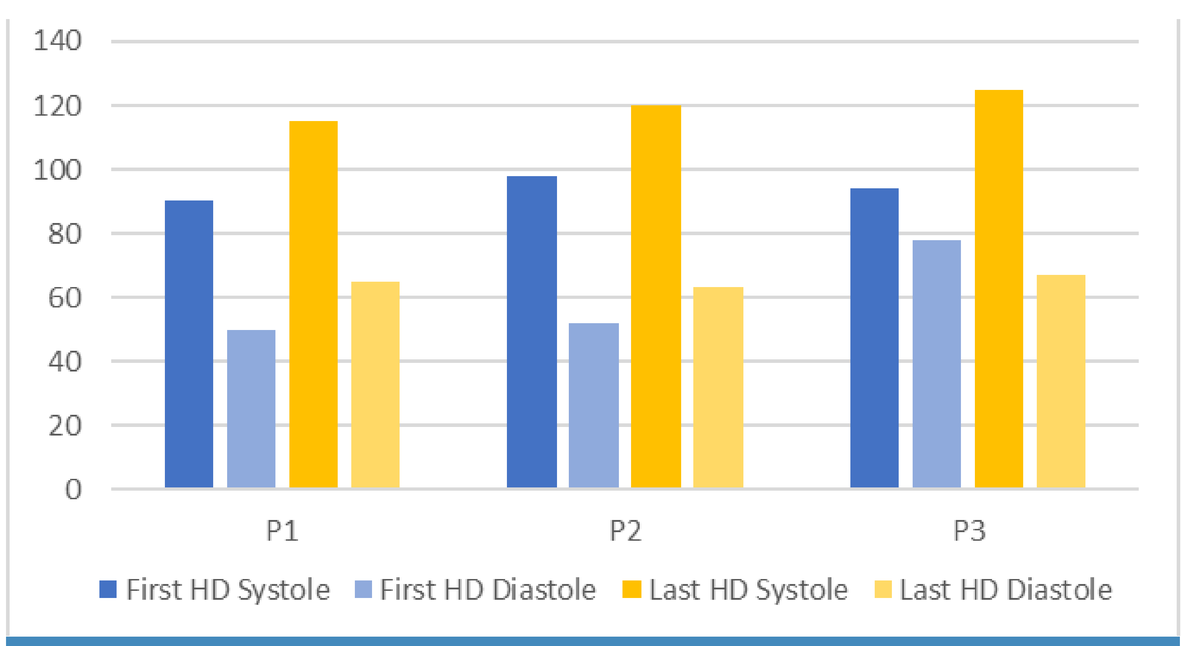

Figure 1. Hypotensive patients' blood pressure changing

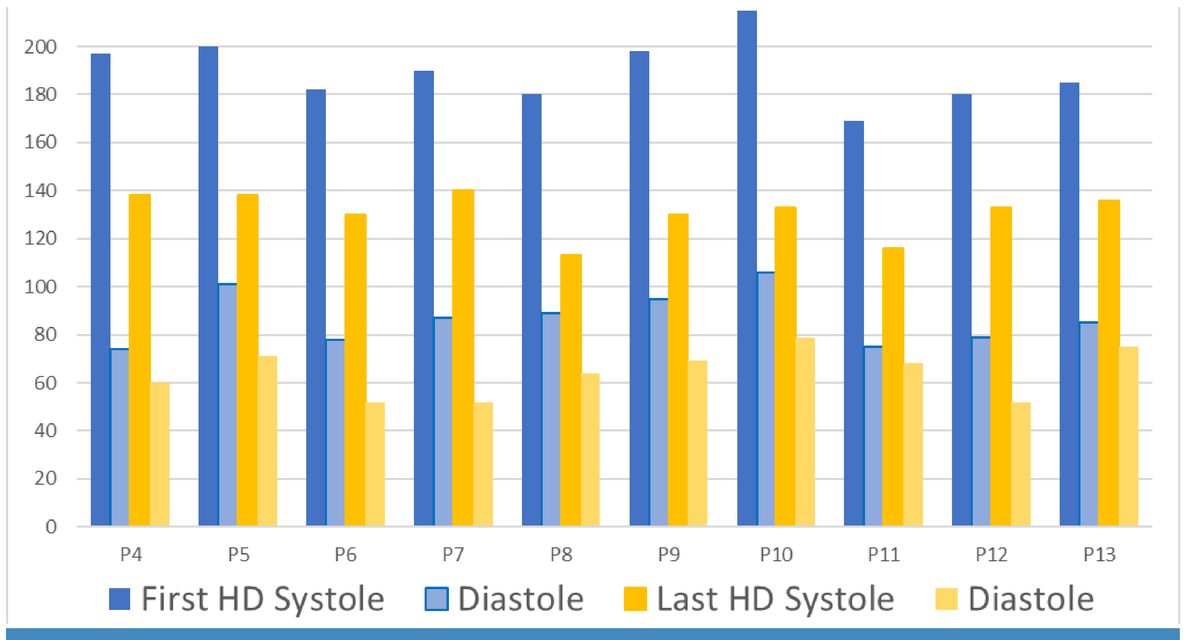

Figure 2. Hypertensive patients' blood pressure changing

Results

In the study period, a decrease of body weight between 3 and 10 kilograms was observed. As a result of the significant ultrafiltration, patients reached their dry weight and became normotensive. Their antihypertensive drugs were reduced significantly. At the start of dialysis treatment, 4 of the 23 patients were hypotensive and 19 were hypertensive. When dry weight was reached, antihypertensive medication was ceased in 65% of the patients. 3 patients with hypotension and 13 patients with hypertension became normotensive (Figure 1 and 2).

Conclusion

Patients with acute kidney injury associated hyperhydration can successfully reach normotension with well planned ultrafiltration during the acute dialysis treatments. Education and patient awareness and cooperation greatly influence the achievement of volume control and the maintenance of successful fluid balance.

References

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