

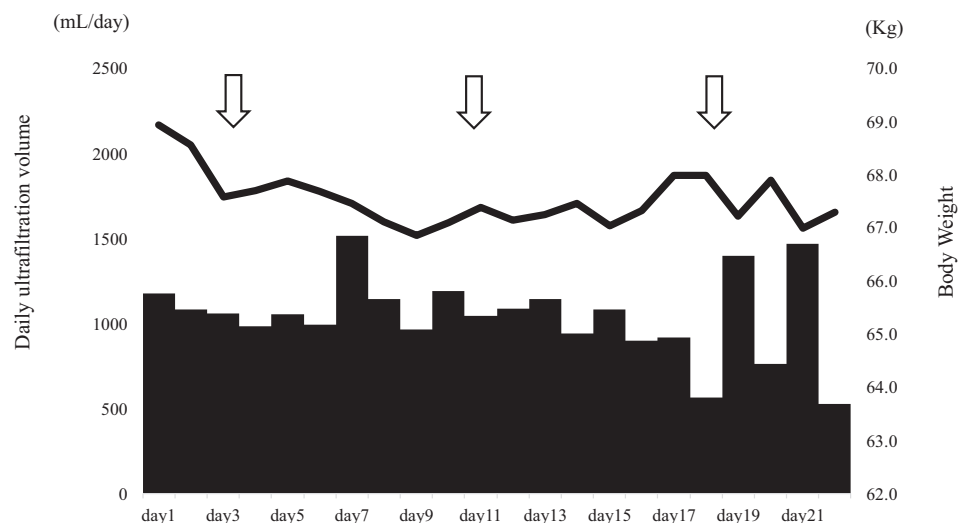
## Temporary switching from combination therapy to peritoneal dialysis monotherapy during the COVID-19 pandemic: A case report

Dear Editor,

Combination therapy with peritoneal dialysis (PD) and hemodialysis (HD) has been shown to be associated with a superior prognosis compared to PD alone [1]. In addition, it is known that combination therapy not only has medical merits such as correction of fluid overload and improvement of uremic symptom, but also improves quality of life because it can set day that do not require PD [2]. Here, we report a combination therapy patient certified as a close contact with COVID-19.

A 50-year-old man with end-stage kidney disease due to diabetic nephropathy, who had been on PD for 1 year, PD alone was switched to combination therapy (once-weekly HD and six times weekly PD) because he had rapid decline in residual kidney function and systemic edema associated fluid overload. Although the combination therapy quickly improved systemic edema, his wife had COVID-19. He certified as a close contact, was instructed by the public health center that he needed to be home isolation for about 3 weeks. Subsequently, dialysis therapy was discussed between the medical staff and

the patient by phone, and we decided to switch from combination therapy to PD alone during the period of home isolation. In addition, remote patient monitoring (body weight and treatment history) was performed using Sharesource<sup>®</sup> developed by Baxter Healthcare. At the time of combination therapy, his continuous cyclic PD prescription was for 6 h for each treatment, based on a 2-L (2.5% glucose-based PD solution) dwell volume, the frequency of exchange was 2 cycles and 1.5-L icodextrin last fill. During home isolation, it was necessary to obtain more ultrafiltration volume, the number of cycles was increased from 2 to 3 cycles and the treatment time was extended to 8 h. Figure 1 shows changes in body weight and ultrafiltration volume during the isolation period. The ultrafiltration volume was 500–600 ml per day before isolation, whereas about 1000 ml per day was obtained during isolation. There was no significant increase in body weight change, and cardiothoracic ratio was no change. Although blood urea nitrogen was 65.8 mg/dl before the change of dialysis therapy, it did not increase when the combination therapy was resumed (53.7 mg/dl).



**FIGURE 1** Changes in daily ultrafiltration volume and body weight during home isolation. The bar graph shows the daily ultrafiltration volume, the line graph shows the body weight and the three arrows represent scheduled hemodialysis

Furthermore, there were no abnormalities that should be intervened in the electrolyte disorder. Fortunately, no COVID-19 infection was confirmed after home isolation, and he was able to avoid a total of three HD sessions. We obtained the patient's consent for describing his case.

We believed that the reason why appropriate fluid and solute management was obtained even after the change from combination therapy to PD alone was influenced not only by the PD prescription change but also by the improvement of patient adherence. Remote patient monitoring was reported to be positive in terms of patient satisfaction [3], and we speculate that it contributed to improved adherence.

Although it is widely known that PD is a good indication as one of the dialysis therapies during COVID-19 pandemic [4], switching from temporary combination therapy to PD monotherapy is also a useful method.

#### FUNDING INFORMATION

None.

#### CONFLICT OF INTEREST



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#### DATA AVAILABILITY STATEMENT

The data can be available from the corresponding author on reasonable request.

#### ETHICS STATEMENT

The study adhered to the principles of the Declaration of Helsinki.

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