

## ‘Soybean sauce’ peritoneal dialysate

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A 68-year-old woman with end-stage diabetic nephropathy undergoing continuous ambulatory peritoneal dialysis for 2 years was admitted for septic shock with coma, who was found hours earlier. Physical examination revealed an unconscious febrile woman with blood pressure of 84/49 mm Hg. Blood tests showed a haemoglobin of 11.5 (normal 12–15) g/dL, white blood cell (WBC) count of  $11.3 \times 10^9/L$  with 82% of segmented neutrophils, high creatine kinase level of 3050 (normal 20–170) U/L, as well as elevated aspartate aminotransferase (198, normal 11–45 U/L) and alanine aminotransferase level (117, normal 7–50 U/L). The peritoneal dialysate was initially clear, but became reddish-brown (Figure 1A) with a red blood cell (RBC) count of 1/ $\mu L$  and WBC 12/ $\mu L$  at the next exchange several hours later, and progressed to ‘soybean sauce’-like (Figure 1B) on the second hospital day when the analysis demonstrated an occult blood reaction of 3+ by dipstick, RBC 14/ $\mu L$ , WBC 200/ $\mu L$  with neutrophils 83%, bilirubin 0.1 mg/dL, along with a serum haemoglobin of 10.5 g/dL. Despite intensive management with potent intravenous antibiotics and high-dose inotropic agents, the patient died on the third hospital day. The dialysate kept the same appearance without precipitation even after being stored for 7 days.

The abundant peritoneal dialysable [1] myoglobins from progressive rhabdomyolysis precipitated by long-term immobilization and profound septic shock [2] in our patient are favoured to have caused the ‘soybean sauce’ dialysate because of the strongly positive occult blood reaction with only 14 RBC/ $\mu L$  in the dialysate. The nearly constant serum haemoglobin level and extremely low dialysate bilirubin level further convincingly excluded the possibility of intra-abdominal bleeding and bile leakage, respectively. The discoloured peritoneal dialysate by myoglobin is rarely described. Another interesting report is the ‘cola-coloured’ effusion in a peritoneal dialysis patient suffering from rhabdomyolysis with a dialysate myoglobin level of 20 406  $\mu g/L$  [3].

*Conflict of interest statement.* None declared.

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A



B



**Fig. 1.** The peritoneal dialysate of a 68-year-old uraemic woman undergoing continuous ambulatory peritoneal dialysis with septic shock and rhabdomyolysis became reddish-brown a few hours after admission (A) and progressed to 'soybean sauce'-like on the next day (B).