E. Gulcan^{1*}
 M. Korkmaz²
 V. Kadir¹
 B. Sanal²
 A.H. Vural³

Treatment with Povidone-Iodine of Pleural Effusion Due to Diaphragmatic Defect in a Patient Undergoing Peritoneal Dialysis

Department of Nephrology¹, Radiology²
 and Cardiovascular Surgery³
 Dumlupinar University Medical Faculty, Kutahya, Turkey

*email: drerimgulcan@gmail.com

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We report on a case in which hydrothorax developed after continuous ambulatory peritoneal dialysis (CAPD), and the diaphragmatic defect was treated by applying povidone-iodine via tube thoracostomy.

A 67-year-old male patient with end-stage renal failure had undergone CAPD for approximately 6 months. The patient was admitted to our clinic with dyspnea 2 weeks after the coronary artery bypass surgery. A chest X ray found a left-sided pleural effusion (Figure 1) determined to be the result of leakage between the pleural leaves during peritoneal dialysis (PD). The PD treatment was temporarily interrupted and hemodialysis was started. A possible diaphragmatic defect was thought to be present, and pleurodesis was performed by administering povidone-iodine. The clamped chest tube was not opened for 2 days. After 3 days, the PD treatment was restarted. Pleural effusion was not observed on control images (Figure 1). The patient's thyroid function remained normal at follow-up.

Pleural effusion associated with PD is a rare and rarely life-threatening complication of PD (1). The traditional treatment for PD-driven hydrothorax is to interrupt PD for 2 to 6 weeks (2). Pleurodesis is recommended for the treatment of recurring pleural effusions (3). Godazandeh *et al.* reported that pleurodesis with povidone-iodine is effective and safe for the treatment of refractory malignant pleural effusions (4). In our case, povidone-iodine was administered between the pleural leaves after the pleural fluid was drained, and PD was started again 3 days later.

In conclusion, pleurodesis with povidone-iodine may be performed for PD patients if a pleural effusion develops due to a diaphragmatic defect.

DISCLOSURES

The authors have no financial conflicts of interest to declare.

Figure 1 — Pre-treatment (a), post-treatment first month (b), and ninth month (c) images.

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