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Journal

UCLA Department of Medicine Clinical Insights, 1(2)

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Publication Date

2026-07-10

DOI

10.5070/V6.62977

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Visual Diagnosis Pearl

Amlodipine Induced Chyloperitoneum

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<https://doi.org/10.5070/V6.62977>

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Vol. 1, Issue 2, 2026

A 62-year-old female with a past medical history of systemic sclerosis requiring a bilateral lung transplant, who later developed BK nephropathy requiring initiation of peritoneal dialysis (PD) two years prior, presented with cloudy/milky effluent ([Figure 1](#)).

The patient reported no abdominal pain, fever or chills. Highest on the differential for cloudy effluent was bacterial peritonitis. Cell count and culture were obtained ([Table 1](#)); the effluent was described as hazy, but the total cell count was 57 cells/ μ L and cultures were negative. In the absence of abdominal pain and with a normal cell count, criteria for peritonitis were not met. The cloudy effluent self-resolved within a week but recurred two weeks later without symptoms; repeat studies were again normal. Chyloperitoneum was considered as an alternative etiology, and effluent triglycerides checked which was 23 mg/dL ([Table 2](#)). The asymptomatic cloudy effluent persisted intermittently over the next several months, appearing for about a week at a time and resolving for 1–2 weeks.

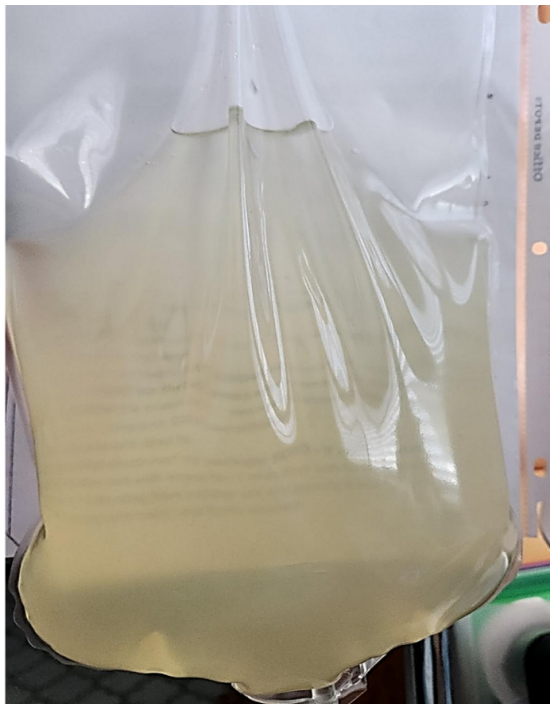


Figure 1. Cloudy PD fluid effluent.

DISCUSSION

Literature review revealed that certain medications can cause cloudy effluent, including calcium channel blockers (CCBs), which have been associated with chyloperitoneum (1). Our patient was taking amlodipine 10 mg for Raynaud's disease. After discontinuation, the cloudy effluent resolved and has not recurred for over 6 months. A 2019 systematic review (2) identified 17 studies linking eight CCBs—amlodipine, benidipine, diltiazem, lercanidipine, manidipine, nifedipine, nisoldipine, and verapamil to chyloperitoneum. Reported cases similarly had negative cultures and normal cell counts. The exact mechanism for CCB-related chylous ascites formation is unknown, but it is theorized to stem from the lipophilic nature of CCBs and inhibition of voltage gated calcium channels in lymphatic vessel smooth cells. This causes lymphatic dysregulation with vasodilation and increased hydrostatic pressure in the lymph vessels, leading to exudation of lymph through the dilated vessels (3). Diagnostic triglyceride thresholds vary from 110 to >200 mg/dL (4). However, a systematic review of 29 cases found significantly lower triglyceride levels in PD patients, likely due to dilution by dialysate (3), which may explain our patient's lower peritoneal triglyceride level.

Cloudy effluent can be distressing for patients, and infection must remain the primary concern given its serious consequences. However, nephrologists should consider the broad differential, including medication-induced chyloperitoneum. The patient was relieved after resolution of her chyloperitoneum.

Table 1. PD Fluid Lab Results

	Initial effluent cell count	Effluent cell count after recurrence of cloudy fluid (2 weeks from initial)
APPEARANCE	Hazy	Clear
TNC Count	57.0 Cell/uL	26.0 Cell/uL
RBC COUNT	<10000.0 Cell/uL	<10000.0 Cell/uL
NEUTROPHILS	13.0 %	11.0 %
LYMPHS	5.0 %	11.0 %
MONONUCLEARS	81.0 %	76.0 %
MESOS	1.0 %	2.0 %
EOSINOPHILS	0.0 %	0.0 %

Table 2. PD Fluid Triglyceride Level

	Triglyceride (fluid)	Serum Lipase (13 - 69 U/L)	Serum Amylase (31 - 124 U/L)	Serum Cholesterol (md/dL)	LDL (md/dL)	HDL (md/dL)	Triglycerides (md/dL)
Result	23 mg/dL	93 U/L	15 U/L	218	67	114	187



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REFERENCES

1. Piscitani L, Reboldi G, Venanzi A, et al. Chyloperitoneum in peritoneal dialysis secondary to calcium channel blocker use: Case series and literature review. *J Clin Med*. 2023;12:1930. doi:[10.3390/jcm12051930](https://doi.org/10.3390/jcm12051930)
2. Kim S, Yu YM, Kwon J, Yoo H, Jung SH, Lee E. Calcium channel blocker-associated chyloperitoneum in patients receiving peritoneal dialysis: A systematic review. *Int J Environ Res Public Health*. 2019;16:1333. doi:[10.3390/ijerph16081333](https://doi.org/10.3390/ijerph16081333)
3. Tsai MK, Lai CH, Chen LM, Jong GP. Calcium channel blocker-related chylous ascites: A systematic review and meta-analysis. *J Clin Med*. 2019;8(4):466. doi:[10.3390/jcm8040466](https://doi.org/10.3390/jcm8040466)
4. Cardenas A, Gelrud A, Chopra S. Chylous, bloody, and pancreatic ascites. UpToDate. <https://www.uptodate.com/contents/chylous-bloody-and-pancreatic-ascites>