

Cyclic Hemoperitoneum in a Patient Undergoing Peritoneal Dialysis: A Case Report

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Abstract:

Cyclic hemoperitoneum in female patients on peritoneal dialysis is usually benign and related to menstruation and ovulation. Ovulation-related cyclic hemoperitoneum occurs in mid-cycle and usually settles at the end of the cycle; the mainstay of treatment consists of cessation of ovulation. Here we present a case of cyclic hemoperitoneum, possibly ovulation-related, in a patient on continuous ambulatory peritoneal dialysis, and discuss the literature.

Key Words: Peritoneal Dialysis, Menstrual cycle, hemoperitoneum.

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Introduction

Worldwide, chronic kidney disease (CKD) is labelled as a growing epidemic among major non-communicable diseases. [1]

End Stage Kidney disease patients recently have more awareness to choose peritoneal dialysis as a modality for renal replacement therapy due to better survival and quality of life. [2]

Hemoperitoneum is a benign and less frequent complication of peritoneal dialysis occurring as a result of menstruation, catheter-related malfunctions, and intra-abdominal pathology of solid organs and the gastrointestinal tract. [3] [4]

Here we present a case of cyclic hemoperitoneum in a patient on peritoneal dialysis.

Case Report:

A 33-year-old female with CKD 5 undergoing continuous ambulatory peritoneal dialysis had a diagnosis of rheumatic heart disease since childhood. She also had bilateral sensorineural deafness. She was admitted under the department of nephrology with complaints of cyclic blood-tinged peritoneal dialysate effluent for one year (figure 1). The bleeding usually occurred 2 to 3 days prior to menstruation. It used

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to settle down once menstruation started. No history of abdominal pain, bleeding from other orifices or fever.

Upon admission, the patient was vitally stable, had pallor, a pan systolic murmur in the mitral area, and an early diastolic murmur on the left sternal border. No other significant finding on gross physical examination.

Coagulation profile and platelet counts were within normal limits. An ultrasound pelvis followed by contrast-enhanced CT abdomen and pelvis was done, which revealed no definitive source of bleeding.



Figure 1: Hemoperitoneum observed in a female patient undergoing Peritoneal Dialysis

Packed red blood cells were transfused, and iron supplements along with erythropoietin were started for anemia. A gynecology review was done, and a diagnosis of retroperitoneal bleeding secondary to ovulation was made. Rapid flushes were done to clear the peritoneum. Anovulant therapy couldn't be started because of her underlying cardiac issue. The patient was counseled and discharged with follow-up advised.

Discussion:

Intraperitoneal bleeding can be caused by ovulation which results from an ovarian follicle rupture during the ovulation process which occurs typically in the middle of the menstrual cycle. [5] Our patient had peritoneal bleeding in the mid menstrual cycle and settled at start of menstrual bleeding favoring our diagnosis. Exclusion of any cause of hemoperitoneum, as in case of ovulation, various conservative steps of management should be initiated such as flushes with dialysate at room-temperature. This irrigates the peritoneal cavity, removes blood and thus lowers the clotting risk of catheter. It also induces constriction of blood vessels because of the cool temperature [3]. Moreover, the targeted treatment that should be considered is anovulant therapy for ovulation suppression which was not possible in our case provided her history of underlying cardiac disease. [6]

Conclusion:

In conclusion, in a female patient on PD, a good history and timing of retroperitoneal bleeding with respect to menstrual cycle may help in reaching the diagnosis. The ovulation related hemoperitoneum, is a benign condition, provided other possible causes have been ruled out.

Conflict Of Interest: None declared.

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