

CASE-1: Ni Kadek Mulyantari, Tania Wangunhardjo, I Made Mahayasa, Ngakan Putu Daksa Ganapati

Faculty of Medicine, Udayana University / Prof. Dr. I.G.N.G Ngoerah Hospital, Denpasar Bali–Indonesia



E-mail: kadek_mulyantari@unud.ac.id

Case History

The patient is a 51-year-old woman diagnosed with Wound dehiscence following a colon transverse colostomy and Adenocarcinoma of the Rectosigmoid. The Clinical Chemistry results were:

Analyte	Results	Biological Reference interval
Creatinine	0.62 mg/dL	0.57–1.1
Bun	9.2 mg/dL	6.0–23.0
e-GFR	104.4	>90
AST	28 U/L	11.0–27.0
ALT	22 U/L	11.0–34.0
Albumin	2.60 g/dL	3.40–4.80
Blood glucose	120 mg/dL	70–140
Sodium	132 mmol/L	136–145
Potassium	3.71 mmol/L	3.50–5.10
Chloride	94.8 mmol/L	96–108

Questions:

1. What is the indication to check the analyte?
2. What is the interpretation of the clinical chemistry result?
3. Are there any other tests you might suggest to the patient?

Discussion

Question 1

The patient suffers from colorectal cancer and received chemotherapy drugs. Though chemotherapy is an effective way to treat cancer, it also carries a risk of side effects. The purpose of clinical chemistry tests in this patient is to predict the presence of side effects of chemotherapy and tumor metastases.

The patient plans to continue Folfox VI chemotherapy 3 series and radiotherapy. Other indications of laboratory examination in this patient are routine pre-chemotherapy blood tests and routine pre-operation procedures. The patient also plans to do wound debridement on the colostomy site. Routine pre-chemotherapy blood tests can be undertaken within 2-3 days of treatment.

Question 2

The interpretation of clinical chemistry results were normal liver function test, normal kidney function test, and normal electrolyte parameters. The patient suffers from hypoalbuminemia. Hypoalbuminemia in this patient can be caused by a hypermetabolism state and decreased nutritional intake.

Question 3

Complete blood count is one of the most important tests before and after chemotherapy. Chemotherapy-induced alterations in complete blood count may cause many significant problems in clinical practice. Anemia, neutropenia, and thrombocytopenia induced by chemotherapy regimens may cause life-threatening complications such as severe infections and hemorrhagic complications. Moreover, these side effects may also necessitate dose reduction and/or delay in schedules of chemotherapy treatment.

References

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