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Letter to the Editor

Acute Myocardial Infarction in a Patient with Hodgkin Lymphoma After ABVD Treatment

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Dear Editor,

A 23-year-old male patient was diagnosed with nodular sclerosis classic Hodgkin lymphoma. He was diagnosed with lymphadenopathy in his left inguinal region for 6-7 months from the excisional biopsy. The patient had no B symptoms at diagnosis. He had no other known diseases or medications in his medical history, but he was a smoker. There was a history of nasopharyngeal cancer in his father and uncle in his family history. The patient underwent positron emission tomography (PET). PET was performed, and the patient was staged as Ann Arbor stage 3A. Echocardiography (ECHO), electrocardiography (ECG), and cardiological examination were requested before starting chemotherapy. The cardiological examination detected no pathology, and the ECHO and ECG results were evaluated as normal. The patient's weight was 95 kg, and his height was 185 cm. The patient was started on doxorubicin, bleomycin, vinblastine, and dacarbazine (ABVD) chemotherapy by calculating the body surface area based on the corrected body weight. The patient received chemotherapy in the outpatient chemotherapy unit without any problems, and he was called for control 5 days later for a blood count. However, the patient applied to the emergency department because of chest pain 4 days after receiving chemotherapy. The patient was diagnosed with acute myocardial infarction (MI) as a result of examinations, and angiography was performed. The ECG image is shown in Figure 1 when the patient presents to the emergency department with chest pain. A stent was inserted during angiography. The patient was discharged after the procedure and was followed up. Chemotherapy was interrupted for approximately 1 month. After MI, dosage adjustments were made according to the patient's chemotherapy protocol. The patient continued cardiology follow-up after MI. At follow-up, no sequelae were noted. The ejection fraction increased to the normal range. Chemotherapeutic drugs, such as anthracycline, are frequently used to treat various malignant cancers. The use of these drugs is severely limited by cardiotoxicity, which is classified as type I cardiotoxicity and characterized by cardiomyocyte death leading to permanent harm and a 50% 1-year mortality rate [1,2]. The most frequent side effect of anthracycline is left ventricular systolic dysfunction, which is primarily caused by myocyte destruction and fibrous tissue replacement [3]. The reports that are now available imply that anthracycline-induced cardiac damage develops over time and occurs throughout exposure. Although HF and arrhythmias might appear suddenly (within weeks of exposure), most patients who come months to years after exposure to anthracycline develop HF and problems from LV systolic dysfunction (congestion, cardiogenic shock) (4). Our patient exhibited some differences from previous reports. First, the patient received ABVD chemotherapy for the first time and did not have cumulative dose accumulation. The patient was 23 years old, and he had no etiology other than smoking, which would increase the risk of cardiovascular disease. Second, the ECG, ECHO, and cardiological examination performed before the start of chemotherapy were completely normal. As a

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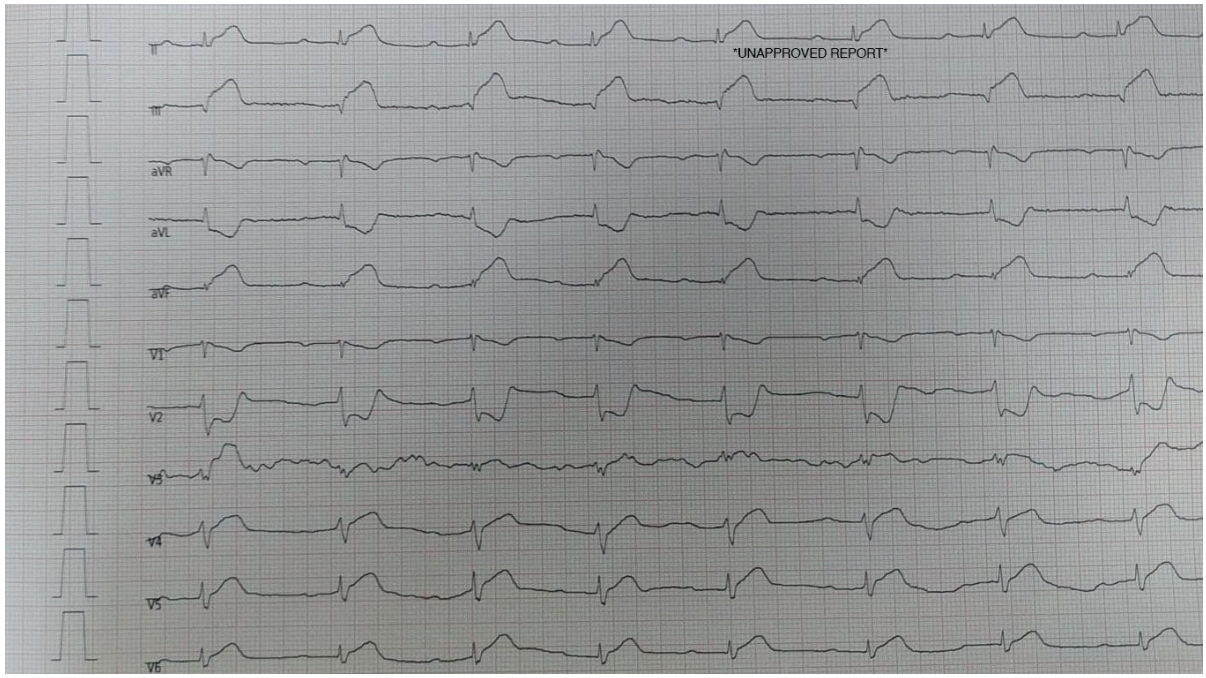

Figure 1. ECG image when the patient presented to the emergency room with chest pain and ST elevation in the inferior leads D2, D3, and AFV, accompanied by ST depression in V1 and V2, inferior-posterior myocardial infarcts, and hyperacute period
ECG: Electrocardiography

result, although anthracycline-based chemotherapy regimens often cause advanced cardiotoxicity, it should be kept in mind that they may cause cardiac diseases, such as MI, in the acute period.

Ethics

Informed Consent: Informed consent was obtained from the patient.

Authorship Contributions

Surgical and Medical Practices: R.Ç., Concept: R.Ç., Design: R.Ç., Data Collection or Processing: S.K., Analysis or Interpretation: S.K., Literature Search: R.Ç., S.K., Writing: R.Ç.

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