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CASE REPORT

Cardiotoxicity in a Patient with Multiple Relapses of Non-Hodgkin Lymphoma

Cardiotoxicité Chez un Patient Ayant De Multiples Chutes De Lymphome Non Hodgkinien

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ABSTRACT

BACKGROUND: Chemotherapy-induced cardiomyopathy is one of the most important adverse effects in cancer treatment. Many chemotherapeutic agents are known to be cardiotoxic, including anthracyclines, monoclonal antibodies, alkylating agents, and protein kinase inhibitors.

OBJECTIVE: It is intended to indicate a mechanism of multiple cardiac injury after exposure to various chemotherapeutic agents with cardiotoxic potential. This article illustrates the case of a 70-year-old male patient diagnosed with non-Hodgkin's lymphoma with multiple relapses and malignant transformation to diffuse large B-cell lymphoma who received multiple cycles of chemotherapy with periods of complete remission, who presented to the hospital emergency with decompensated reduced ejection fraction heart failure (EF:40%).

RESULTS: During the hospitalization the patient suffered refractory electrolyte imbalances and hospital-acquired infections. Although the patient received hypertonic saline solution, multiple potassium challenges, and extended spectrum antibiotics, the patient passed away.

CONCLUSION: Exposure to different chemotherapeutic agents with cardiotoxic potential included in non-Hodgkin lymphoma treatment schemes can trigger myocardial injury by different mechanisms. Cardio-oncology is a field that is emerging and working on new strategies for the diagnosis, prevention, and management of chemotherapy-induced cardiotoxicity. **WAJM 2024; 41 (12): 1225-1230**

KEYWORDS: (MeSH): Lymphoma; Non-Hodgkin Lymphoma; Cardiomyopathies; Cardiotoxic Agents; Drug Therapy; Recurrence.

RÉSUMÉ

CONTEXTE: La cardiomyopathie induite par la chimiothérapie est l'un des effets indésirables les plus importants du traitement du cancer. De nombreux agents chimiothérapeutiques sont connus pour être cardiotoxiques, y compris les anthracyclines, les anticorps monoclonaux, les agents alkylants et les inhibiteurs de protéine kinase.

OBJECTIF: Il vise à indiquer un mécanisme de lésions cardiaques multiples après exposition à divers agents chimiothérapeutiques à potentiel cardiotoxique. Cet article illustre le cas d'un homme de 70 ans diagnostiqué avec un lymphome non hodgkinien avec de multiples rechutes et une transformation maligne en lymphome diffus à grandes cellules B qui a reçu plusieurs cycles de chimiothérapie avec des périodes de rémission complète, qui s'est présenté à l'hôpital urgence avec insuffisance cardiaque à fraction d'éjection réduite décompensée (FE: 40 %).

RESULTATS: Au cours de l'hospitalisation, le patient a souffert de déséquilibres électrolytiques réfractaires et d'infections nosocomiales. Bien que le patient ait reçu une solution saline hypertonique, de multiples provocations potassiques et des antibiotiques à spectre étendu, le patient est décédé.

CONCLUSION: L'exposition à différents agents chimiothérapeutiques à potentiel cardiotoxique inclus dans les schémas thérapeutiques des lymphomes non hodgkiniens peut déclencher des lésions myocardiques par différents mécanismes. La cardio-oncologie est un domaine qui émerge et travaille sur de nouvelles stratégies pour le diagnostic, la prévention et la gestion de la cardiotoxicité induite par la chimiothérapie. **WAJM 2024; 41 (12): 1225-1230**

MOTS CLES: (MeSH) : Lymphome; lymphome non hodgkinien; cardiomyopathies; agents cardiotoxiques; pharmacothérapie; Réurrence.

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Abbreviations - **NHL:** Non-Hodgkin lymphoma ; **CHOP regimen:** Cyclophosphamide, Doxorubicin, Vincristine, and Prednisone ; **LVEF:** Left ventricular ejection fraction ; **R-CHOP regimen:** Rituximab, Cyclophosphamide, Doxorubicin, Vincristine, and Prednisone ; **LDH:** Lactate dehydrogenase ; **R-GemOx regimen:** Rituximab, Gemcitabine, Oxaliplatin, Cyclophosphamide ; **PET scan:** Positron emission tomography; **Hb:** Hemoglobin; **Leu:** Leucocytes; **Pro-BNP:** pro-B type natriuretic peptide; **CVP +/- R regimen:** Cyclophosphamide, Vincristine, Prednisolone +/- Rituximab; **R-CEOP regimen:** Rituximab, Cyclophosphamide, Etoposide, Vincristine, and Prednisone; **R-GCVP regimen:** Rituximab, Gemcitabine, Cyclophosphamide, Vincristine and Prednisolone; **R-COMP regimen:** Rituximab, Cyclophosphamide, Non-pegylated liposomal doxorubicin, Vincristine, and Prednisone; **NPLD:** Non-Pegylated Liposomal Doxorubicin; **R-COMP:** Rituximab, Cyclophosphamide, Vincristine, Non-Pegylated Liposomal Doxorubicin, and Prednisone; **DLBCL:** Diffuse Large B-Cell Lymphoma; **R-DHAP:** Rituximab, Dexamethasone, Cytarabine, Cisplatin