BUCCAL KAPOSI'S SARCOMA ASSOCIATED WITH HIV INFECTION AND COVID-19: A case report

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July 8, 2022

Abstract

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Data availability statement: not applicable

Funding statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Ethics approuval statement

We respected the ethic for this work

Patient Consent statement: the patient is deceased and the patient's next of kin cannot give consent.

Permission to reproduce material from other sources: not applicable

Clinical trial registration: not applicable

Abstract

Kaposi's sarcoma is a common cancer associated with HIV infection. Since the COVID-19 pandemic, the prevalence of this pathology has increased. We report a case of a 33-year-old patient who presented with Kaposi's sarcoma associated with Covid-19 and HIV coinfection. It promotes the progression of cancers and increases mortality.

Key words: Cancer; Covid-19; HIV; Infection; Kaposi's sarcoma

Introduction

Covid-19 remains a global pandemic since March 2020. The severity lies in acute respiratory distress syndrome and multi-organ failure. In addition, several skin manifestations have also been widely documented including frostbite-like lesions, erythema multiforme and maculopapular lesions [1].

Hypotheses have been published regarding the action of SARS-Cov 2 in triggering the reactivation of other viruses such as HHV-6, HHV-8 and EBV [2, 3].

The worldwide prevalence of SARS-Cov 2 and HIV co-infection is still unknown and constitutes a public health challenge at the time of Covid-19 [4].

Here, we report a case of oral Kaposi's sarcoma associated with SARS 2 and HIV coinfection.

Case report

A 33 year old male, single, referred for consultation in Maxillofacial surgery at the UHC Tambohobe Fianaratsoa Madagascar for generalized swelling of the endobuccal mucosa.

In the history of his illness, one month before his consultation, he had been hospitalized in the pneumology department for a recent febrile dyspnea where they found a pleurisy of medium abundance right whose exploration found an exudative fluid with suspicious cytological examination. During his hospitalization he had tested positive for COVID-19 and was treated as such. One week later, there was an appearance of swelling in the upper gum that spread and generalized within 3 weeks.

The clinical examination on the day of the consultation, we objectified:

- -A dyspneic patient with desaturation at 92% in room air.
- -A bilateral, firm, painless, mobile cervical polyadenopathy.
- -Multiple generalized endobuccal nodulopapular lesions, purplish, painless but bleeding on contact (Figure 1).
- -A pleural effusion syndrome on the right

Note that he had no objectified skin lesions.

The biological tests found

- -Monocytopenia and inflammatory syndrome with CRP at 24 mg/l
- -HIV serology was positive
- -PCR covid control was negative

X-ray showed a pleural effusion on the right.

The patient was admitted to the intensive care unit for desaturation, which worsened to 86% on 3l oxygen.

We performed a biopsy of the lesion which revealed Kaposi's sarcoma. He died after 1 month of hospitalisation.

Discussion

We reported a case of oral Kaposi's sarcoma associated with HIV infection and SARS-Cov2.

It is due to HHV-8 infection and is the common malignant skin tumors associated with HIV infection. Its presence reveals an advanced stage of the disease [5].

Since covid 19, several studies have demonstrated the action of SARS Cov 2 on the reactivation of the HHV 8 virus hence the increased prevalence of Kaposi's sarcoma. They even found that the quality of life of patients with Kaposi's sarcoma infected with SARS Cov 2 without HIV infection is lower than those infected with HIV [1, 6].

A case of an 83-year-old patient was reported for Kaposi's sarcoma of the soles of the feet in a patient followed by Covid 19. HIV serology was tested negative [6].

Cancer is closely related to the risk of severe disease and mortality in patients with COVID-19. Cov 2 SARS could promote tumor progression and stimulate metabolic switching in tumor cells to initiate tumor metabolism with high efficiency. On the other hand, SARS Cov 2 has been shown to delay the progression of some cancers such as NK and Hodgkin lymphoma [7]. This may explain the rapid progression of Kaposi's sarcoma in our case.

Author's contributions

Zo Harimbonona and Tahiriharivelo Randriamanantena participated in the data collection.

Simon Carnot Ndrianarivony did the redaction.

Reference

Busetto GM, Porreca A, Del Giudice F, et al. SARS-CoV-2 infection and high-risk non-muscle-invasive bladder cancer: are there any common features. Urol Int. 2020; 104:7-8: 510-522.10.1159/000509065.

Schäfer, G., Blumenthal, M. J., and Katz, A. A. (2015). Interaction of human tumor

viruses with host cell surface receptors and cell entry. Viruses; 7, 2: 2592–2617. doi: 10.3390/v7052592.

- 3. Schaftenaar E, Verjans G, Getu S, McIntyre JA, Struthers HE, Osterhaus ADME., et al. High seroprevalence of human herpesviruses in HIV-infected individuals attending primary healthcare facilities in rural South Africa. Journal one 2004; 9: 9924.
 - 1. Blumenthal MJ, Lambarey H, Chetram A, riou C, Wilkinson RJ, Schäfer G. Kaposi's sarcoma-associated Herpesvirus, but not epstein-barr Virus, co-infection associates with coronavirus disease 2019 severity and outcome in south african patients. South Africa: Rosemary Ann Dorrington, 2022.
 - 2. Manhaz F, Robert AS. Oral Kaposi's sarcoma: a review and update. Int J Dermatol, 2013 Jun; 52: 666-72.
 - 3. Francesca Magri F, Giordano S, Latini A, Muscianese M. New-onset cutaneous kaposi's sarcoma following SARS-CoV-2 infection. J Cosmet Dermatol. 2021; 20: 3747–3750.
 - 4. Li YS, Ren HC, Cao JH. Correlation of SARS-CoV-2 to cancer: Carcinogenic or anticancer? (Review). International journal of oncology 2022. 60: 42.

Acknowledgments: not applicable

Conflict of interest disclosure

The authors declare that they have no competing interests

Consent: not applicable

