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Case report

Aggressive classic Kaposi's sarcoma: case report

Sarcoma de Kaposi clássico agressivo: relato de caso

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ABSTRACT: *Introduction* Kaposi's sarcoma (KS) is an angioproliferative neoplasm associated with human herpesvirus type 8 (HHV-8). The classic form affects elderly men, presenting with purpuric papules and nodules on the lower limbs, with a slow evolution, usually without the need for specific treatment. *Objective* To report a case of neoplasm of aggressive behavior in the elderly. *Methods* A descriptive study of the case report type was carried out, based on the collection of data from medical records, photographic records and literature review. *Case report* An 86-year-old man presented with brownish and violet papules on the upper limbs, diffuse purplish papules and nodules in the right lower limb, some with a verruciform appearance and purplish papules and nodules on the thigh and posterior region of the left leg. Upper digestive endoscopy showed lesions suggestive of Kaposi's Sarcoma in the duodenum. Immunohistochemistry was positive for CD31, CD34 and HHV-8. The patient presented multiple clinical and laboratory decompensations, which culminated in his death. No specific therapy had been initiated. *Discussion* Classical KS is rare, indolent, and more common in men aged 64 to 72 years, of South American, Mediterranean, or Eastern European Jewish descent. HHV-8 infection, extremely prevalent in our country, has been considered the most important risk factor. The evolution of this malignancy is slow, but the progress of the lesions can be variable, with progression and spread of the lesions in weeks. Visceral involvement, as in the case reported, occurs in less than 10% of cases. In general, KS has a good response to different therapies. *Conclusion* It is imperative that the diagnosis of classic Kaposi's Sarcoma be considered in the face of an aggressive condition, especially in elderly men.

Keywords: Herpesvirus 8; Human; Skin Neoplasms; Sarcoma, Kaposi

RESUMO: *Introdução* O sarcoma de Kaposi (SK) é uma neoplasia angioproliferativa associada ao herpesvírus humano tipo 8 (HHV-8). A forma clássica afeta homens idosos, apresentando pápulas e nódulos purpúricos nos membros inferiores, de evolução lenta, em geral sem necessidade de tratamento específico. *Objetivo* Relatar caso de neoplasia de comportamento agressivo em idoso. *Método* Foi realizado estudo descritivo do tipo relato de caso, a partir da coleta de dados do prontuário, do registro fotográfico e da revisão da literatura. *Relato de caso* Homem, 86 anos, apresentando pápulas acastanhadas e violáceas nos membros superiores, pápulas e nódulos violáceos difusos pelo membro inferior direito, algumas de aspecto verruciforme e pápulas e nódulos violáceos na coxa e na região posterior da perna esquerda. A endoscopia digestiva alta evidenciou lesões sugestivas de Sarcoma de Kaposi no duodeno. A imunohistoquímica foi positiva para CD31, CD34 e HHV-8. O paciente apresentou múltiplas descompensações clínicas e laboratoriais, que culminaram em seu óbito. Não havia sido iniciada terapia específica. *Discussão* O SK clássico é raro, indolente e mais comum em homens de 64 a 72 anos, com descendência sul-americana, mediterrânea ou judeus do leste europeu. A infecção pelo HHV-8, extremamente prevalente em nosso meio, tem sido considerada o fator de risco mais importante. A evolução dessa malignidade é vagarosa, mas o progresso das lesões pode ser variável, com progressão e disseminação das lesões em semanas. O envolvimento visceral, como no caso relatado, ocorre em menos de 10% dos casos. De forma geral, o SK apresenta boa resposta às diferentes terapias. *Conclusão* É imperativo que o diagnóstico de Sarcoma de Kaposi clássico seja considerado diante de um quadro agressivo, especialmente em homens idosos.

Palavras-chave: Sarcoma de Kaposi; Neoplasias Cutâneas; Herpesvirus Humano 8

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INTRODUCTION

Kaposi's sarcoma (KS) is a multifocal angioproliferative neoplasm associated with human herpesvirus 8 (HHV-8) infection[1]. Four clinical forms are described: classical, endemic to Africa, iatrogenic and epidemic related to HIV[1,2]. Classic KS affects mainly elderly men and is characterized by the occurrence of purpuric papules and nodules, which predominate in the lower limbs. In general, it is an indolent disease, which rarely requires specific treatment[3]. Spread to internal organs can occur in more advanced forms[2]. We describe a case of classic KS with aggressive behavior in an elderly man.

OBJECTIVE

To report the case of a patient with severe classic Kaposi's sarcoma, with systemic involvement and adverse outcome.

METHODS

The information contained in this work was obtained through a review of medical records, photographic records and literature review. This is a descriptive case report study. A consent form was signed by the patient's relatives. The project was submitted to the Research Ethics Committee of the Cassiano Antonio Moraes University Hospital, with subsequent approval - CAAE: 57152121.2.0000.5071; Ethics Committee approval Nº 5,335,712.

CASE REPORT

An 86-year-old black man, resident of the metropolitan region of Vitória-ES, retired (previously a carpenter), incomplete elementary school, hypertensive and dyslipidemic, attended outpatient care at the Dermatology Service of the *Cassiano Antonio Moraes* University Hospital for the first time. He reported the onset of an erythematous plaque in the right leg five years ago, which evolved with radial growth and the appearance of adjacent nodules and papules. He referred to the recent appearance of similar lesions in the contralateral limb. He underwent treatment with systemic corticosteroids for a long period, followed by abrupt discontinuation. Previous skin biopsies suggested lobular capillary hemangioma and pyogenic granuloma.

Dermatological examination revealed brownish and violet papules on the upper limbs (Figure 1), violet papules and nodules diffused on the right lower limb, some with a verruciform appearance, with seropurulent secretion drainage (Figure 2), and purplish papules and nodules on the thigh and in the posterior region of the left leg, in addition to significant bilateral lymphedema. There was no mucosal involvement.

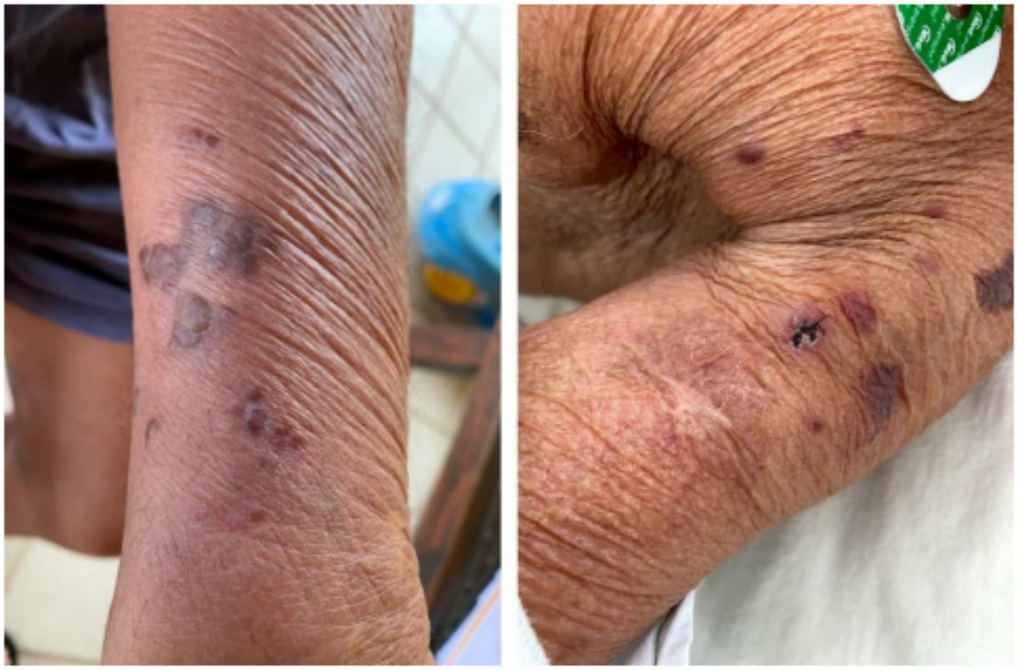

Figure 1. A) Brownish and violet papules in the distal region of the left forearm. B) violaceous papules in the proximal region of the left forearm, where one of the biopsies was performed.

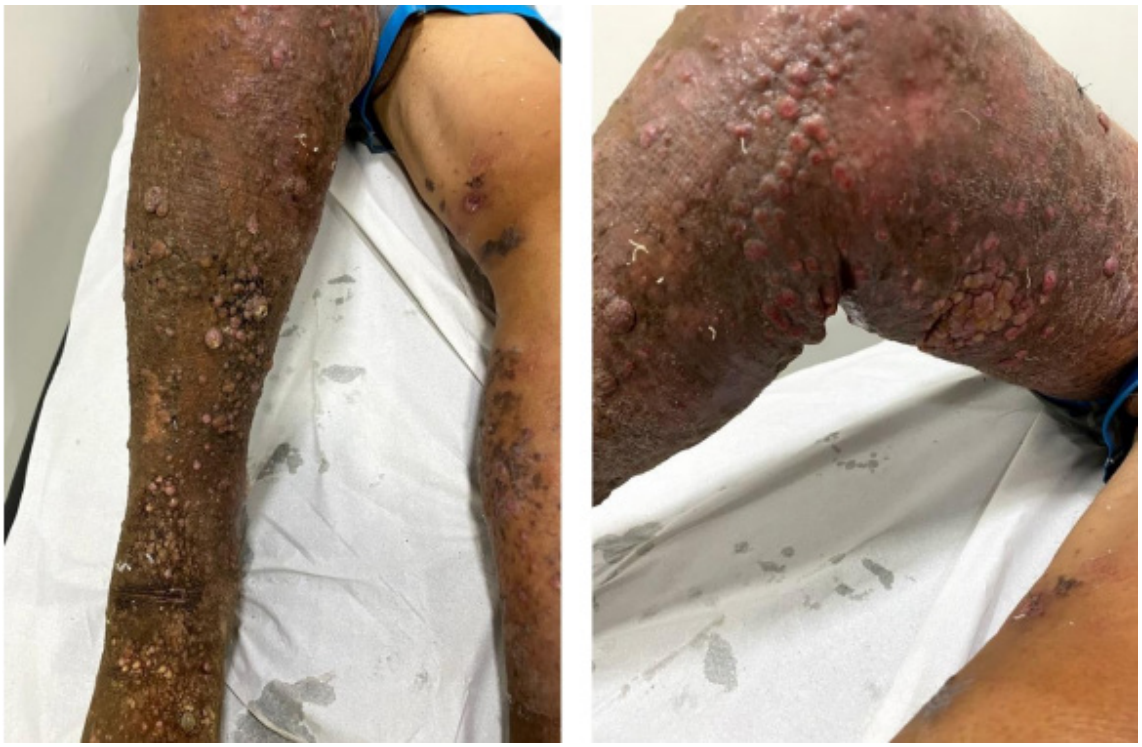

Figure 2. Violet papules and nodules on the right lower limb and medial region of the left leg.

Laboratory tests, including serology, did not show any changes. Imaging tests, such as CT scans of the chest and skull, did not demonstrate neoplastic lesions. Upper digestive endoscopy showed violaceous lesions in the duodenum, suggestive of KS. Histopathological examinations of two skin lesions revealed proliferation of atypical fusiform cells, outlining delicate vascular clefts, with extravasation of red blood cells. The immunohistochemical study determined positivity for CD31 (Figure 3a) and CD34, in addition to the nuclear expression of HHV-8 (Figure 3b), findings consistent with Kaposi's Sarcoma.

Hospital admission was chosen for the administration of intravenous antibiotic therapy, resulting in improvement of the secondary bacterial infection. During hospitalization, the patient developed multiple clinical and laboratory decompensations, in part due to the abrupt discontinuation of systemic corticosteroid therapy. Unfortunately, about a month after discharge, the patient died. No specific therapy had been initiated.

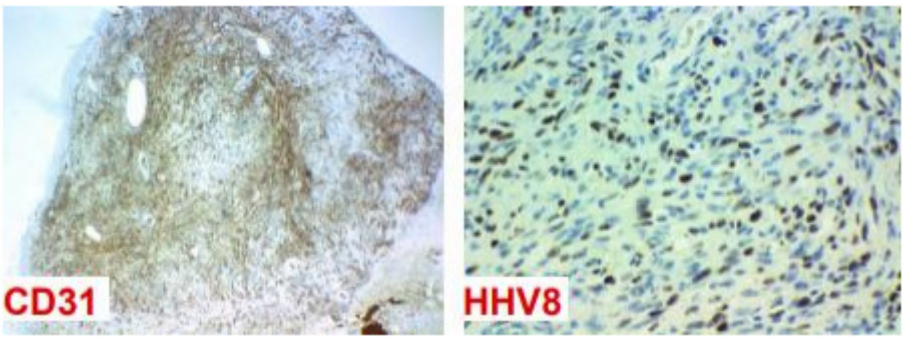

Figure 3. Immunohistochemistry showed positivity for CD31 (A) and CD34, in addition to the nuclear expression of HHV-8 (B).

DISCUSSION

Classic Kaposi's sarcoma (KS) is a rare disease with an indolent course, more common in men between 64 and 72 years of age, of South American, Mediterranean or Eastern European Jewish descent[4]. The male predominance is 2:1 in Italy and 5:1 in Israel[1]. A case of a male patient was presented who reported the onset of the condition at 81 years of age, an age slightly above the average described in the literature.

Infection by HHV-8 has been considered the most important risk factor in the emergence of all types of KS[1,3,4]. Humans are its natural hosts, and the virus establishes lifelong latency in CD19+ B cells. HHV-8 is spread through saliva and sexual contact. Worldwide seroprevalence is estimated at between five and 20%, with Africa and the Brazilian Amazon retaining the lead (>50%), followed by the Mediterranean, Eastern Europe, the Caribbean and the Middle East[4]. Other factors possibly associated with classic KS would be contact with silicate volcanic soil and hematophagous insects[1].

Numerous products of HHV-8 are capable of activating signaling pathways involved in angiogenesis and vascular differentiation. KS can be polyclonal, oligoclonal or monoclonal. It is likely that some cases of KS are actually reactive inflammatory lesions. Subsequently, the genetic alterations that occur due to genetic instability induced by HHV-8 could culminate in monoclonal proliferations that represent true malignancy[1].

In general, the lesions begin as violaceous macules on the distal portion of the lower limbs, which progress to plaques, nodules, and tumor lesions. In the course of the disease, the lesions become more indurated and irregular. The evolution of SKC is slow, but the progress of the lesions can be variable. Macules or tumors may remain unchanged for months or years or progress rapidly within weeks and spread. Rapid growth can lead to central necrosis and ulceration of the lesions[2,5]. The patient reported presented an indolent condition in the first three years, with subsequent rapid worsening of the cutaneous manifestations. At diagnosis, he already had multiple tumor lesions and infiltrated plaques.

Approximately 15% of patients have mucosal involvement and there is visceral involvement in less than 10% of cases[1,2,5]. When it occurs, is more frequent in the lymph nodes and the gastrointestinal system, as in the case reported, but it can also affect the lungs and heart, among others[2].

Histopathological examination is mandatory for diagnosis. The initial lesions show small dilation of the dermal vessels, slight endothelial atypia and deposition of hemosiderin around it. In more advanced forms, there is an increase in the proliferation of cells with a fusiform characteristic, in addition to the formation of irregular vascular clefts and more numerous mitoses[1,2]. Exceptional cases with a lot of cell atypia and little differentiation have been reported, with a poor prognosis. Spindle cells enhance endothelial cell markers, such as CD34 and CD31, as in our report. Identification of HHV-8 is most performed through immunohistochemistry[1,3]. The histopathological analysis described presented the typical and proliferative findings of KS. In addition, the HHV-8 search was positive.

In general, KS has a good response to different therapies. In localized cases, surgery, cryotherapy and radiotherapy can be used, as well as intralesional chemotherapy and alitretinoin gel, which is still unavailable in Brazil. Aggressive forms, with visceral or lymph node involvement, significant lymphedema, local complications, or rapid extension require systemic treatment, which is still poorly systematized[1-3].

The first-line treatment is usually based on the use of liposomal anthracyclines (doxorubicin) and, less frequently, paclitaxel. The use of low-dose interferon-alpha may also be considered for younger patients (< 70 years) with normal cardiac function, but it is often poorly tolerated in older patients[2,3]. Unfortunately, the reported patient died before it was possible to start the specific treatment.

CONCLUSION

We report the case of an 86-year-old patient with disseminated skin lesions and invasion of the gastrointestinal tract by Kaposi's sarcoma. Although the classic subtype rarely develops this way, it is imperative that the diagnosis be considered in the face of an aggressive condition, especially in elderly men, due to the high cure rates when correct and early treatment is established.

It is equally important to warn about the risks of untimely use of corticosteroids (systemic and even topical) in elderly patients. The chronic use of these medications is responsible for numerous side effects, extensively discussed in the literature, and, in addition, is associated with the risk of inadvertent discontinuation by the patients themselves, with drastic and often irreversible consequences. The practice of medicine must be related, above all, to the basic principle of bioethics: "primum non nocere".

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