

A brief discussion on diagnosis of kaposi sarcoma.

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Introduction

Kaposi sarcoma (KS) is a rare form of cancer characterized by the abnormal growth of blood vessels and spindle-shaped cells. Timely and accurate diagnosis of KS is crucial for effective management and improved patient outcomes. This article provides a brief discussion of the various diagnostic approaches and techniques used in the identification and confirmation of Kaposi sarcoma.

Clinical evaluation

Medical history and physical examination: The diagnostic process begins with a detailed medical history and physical examination. The healthcare provider will inquire about symptoms, risk factors, and potential exposures to determine the likelihood of KS. Physical examination may reveal characteristic skin lesions, which can aid in the initial suspicion of the disease.

Assessment of immune status: Determining the patient's immune status is essential, especially in HIV-associated KS. Measurement of CD4 cell count and HIV viral load helps evaluate the severity of immunosuppression and the associated risk of developing KS [1].

Biopsy and histopathological examination

Excisional biopsy: An excisional biopsy involves the removal of the entire lesion for examination. It is considered the gold standard for diagnosing KS. The excised tissue is sent to a pathology laboratory, where it undergoes histopathological examination.

Incisional: In cases where excisional biopsy is not feasible or appropriate, an incisional or punch biopsy may be performed. These techniques involve sampling a portion of the lesion for analysis.

Histopathological examination: The biopsy sample is examined under a microscope by a pathologist. Key features of KS include spindle-shaped cells, abnormal blood vessels, and inflammatory infiltrates. Immunohistochemistry may be used to confirm the presence of human herpesvirus-8 (HHV-8), a necessary component for diagnosing KS [2].

Imaging studies

Dermoscopy: Dermoscopy is a non-invasive technique that uses a handheld device to magnify and visualize skin lesions. It can help identify specific patterns and features suggestive of KS, aiding in the diagnostic process.

X-rays and Computed Tomography (CT) scans: X-rays and CT scans are useful imaging tools for assessing the extent of KS involvement in organs such as the lungs and gastrointestinal tract. They can help identify internal lesions and aid in staging the disease.

Magnetic Resonance Imaging (MRI): MRI is particularly valuable in evaluating soft tissue involvement and identifying KS lesions in areas such as the brain and spinal cord [3].

Laboratory tests

Human Herpesvirus-8 (HHV-8) serology: Laboratory tests to detect antibodies against HHV-8 can support the diagnosis of KS, especially in individuals with atypical presentations or when histopathological findings are inconclusive.

Complete Blood Count (CBC) and blood chemistry: CBC and blood chemistry tests help assess the patient's general health status and provide baseline information for monitoring treatment and managing potential complications [4].

Differential diagnosis

Skin lesions: KS lesions may resemble other skin conditions such as hemangiomas, pyogenic granulomas, or bacillary angiomatosis. The histopathological examination, along with clinical correlation, helps distinguish KS from other similar-looking lesions.

Malignancies: In some cases, KS may coexist with or mimic other malignancies, such as lymphomas or melanomas. A comprehensive evaluation and consideration of the patient's medical history and risk factors are crucial to differentiate KS from other cancers.

The diagnosis of Kaposi sarcoma relies on a combination of clinical evaluation, biopsy and histopathological examination, imaging studies, and laboratory tests. A thorough medical history, physical examination, and assessment of the patient's immune status are important initial steps in the diagnostic process. Biopsy, including excisional, incisional, or punch biopsy, followed by histopathological examination, remains the gold standard for confirming the diagnosis of KS. The presence of spindle-shaped cells, abnormal blood vessels, and HHV-8 positivity on immunohistochemistry supports the diagnosis.

Imaging studies, such as dermoscopy, X-rays, CT scans, and MRI, play a crucial role in assessing the extent of KS involvement, particularly in internal organs. These imaging

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Received: 14-Apr-2023, Manuscript No. AAPMT-23-98561; Editor assigned: 17-Apr-2023, PreQC No. AAPMT-23-98561(PQ); Reviewed: 01-May-2023, QC No. AAPMT-23-98561; Revised: 05-May-2023, Manuscript No. AAPMT-23-98561(R); Published: 11-May-2023, DOI: 10.35841/aapmt-7.3.144

modalities aid in staging the disease and guiding treatment decisions. Laboratory tests, including HHV-8 serology and complete blood count, provide additional supportive information in the diagnostic process. Serological tests for HHV-8 antibodies can be helpful in cases where histopathological findings are inconclusive or when atypical presentations of KS are observed. Complete blood count and blood chemistry tests provide baseline information about the patient's overall health status and aid in monitoring treatment and managing potential complications [5].

Conclusion

Differential diagnosis is an essential consideration in the diagnostic process. KS lesions may resemble other skin lesions or coexist with other malignancies, necessitating careful evaluation and differentiation from similar-looking conditions. The integration of clinical findings, histopathological examination, imaging studies, and laboratory tests helps distinguish KS from other diseases and determine the most appropriate treatment approach. Early and accurate diagnosis of KS is vital for initiating timely treatment and improving patient outcomes. It enables healthcare professionals to develop individualized management plans based on disease stage, immune status, and patient preferences. Collaboration

between dermatologists, oncologists, pathologists, and other specialists is crucial in achieving an accurate diagnosis and providing comprehensive care to individuals with KS.

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