Kikuchi-Fujimoto disease with lateral neck localisation: a case report

Malattia di Kikuchi-Fujimoto: descrizione di un caso clinico a localizzazione latero-cervicale

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Key words

Kikuchi-Fujimoto disease • Lateral neck lymphadenopathy • Case report

Parole chiave

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Summary

The case is described of a Kikuchi-Fujimoto disease, in a 22-year-old female, onset of which was characterised by rapidly evolving lateral neck lymphadenopathy. Since clinico-radiological findings suggested a lymphoproliferative disease, it was mandatory, in order to establish the diagnosis and programme a suitable treatment protocol, to collect a lymph node biopsy specimen. The histological pattern was characteristic of Kikuchi-Fujimoto disease necrotizing lymphadenitis. Bearing in mind the difficulties encountered in the diagnosis of Kikuchi-Fujimoto disease, due not only to lack of a characteristic clinical pattern but also to the generic and aspecific findings emerging from radiological evaluation, the Authors stress the important role of histological examination in establishing the nature of the disease. In their opinion, onset of a rapidly evolving lateral neck lymphadenopathy, in a young patient, in the absence of well-defined disorders possibly responsible for the condition, and in order to establish a correct diagnostic approach, should induce the ENT specialist to take into consideration the possible presence of Kikuchi-Fujimoto disease, even if this is to be considered a rare finding.

Riassunto

Gli Autori presentano un caso di malattia di Kikuchi-Fujimoto insorto in una giovane donna di 22 anni ed esordito con una linfoadenopatia laterocervicale a rapida progressione. Alla luce degli accertamenti clinico-radiologici che orientavano verso una patologia linfoproliferativa, si rese necessario, al fine di pervenire ad una diagnosi di malattia e programmare un corretto trattamento terapeutico, eseguire una biopsia linfonodale la quale mise in evidenza un pattern istologico caratteristico della linfadenite necrotizzante di Kikuchi. In considerazione delle indubbie difficoltà diagnostiche della malattia di Kikuchi-Fujimoto in rapporto ad un quadro clinico privo di peculiarità ed alle generiche ed aspecifiche informazioni fornite dalle indagini radiologiche, gli Autori mettono in risalto il ruolo fondamentale dell'esame istologico per la definizione di malattia. Ritengono inoltre che la comparsa in una giovane paziente di una adenopatia cervico-facciale a rapida evoluzione, in assenza di sicure affezioni che la giustifichino e ai fini di un rigoroso approccio diagnostico, debba indurre l'otorinolaringoiatra a non sottovalutare la possibile presenza di una malattia di Kikuchi-Fujimoto, pur trattandosi di patologia di non frequente riscontro.

Introduction

Kikuchi-Fujimoto disease (KFD), a benign clinical form of necrotizing lymphadenitis of unknown aetiology, involves primarily females between 20-30 years of age, with a female:male ratio of 4:1.
It is somewhat difficult to estimate the frequency of the disease in Western Countries [9], since more than 50% of the cases described refer to patients in Asia and the first report [10] in the literature, specialised in otorhinolaryngology, appeared in 1985.
As yet, KFD is not well known and not easy to evaluate as a potential cause of benign lymphadenopathy in the cervical area.
Albeit, it is worthwhile pointing out that the cervical lymph node system, even in a little known disease, is, without doubt, that more frequently involved; in fact, those cases characterised by generalised lymphadenopathy, hepatosplenomegaly, i.e., involving the extra-lymph node system, appear to be far less frequent [20].

Case report

A 22-year-old female patient came to our attention with a swelling localised in the right rear mandibular angle (level II) onset of which occurred 1 month prior to hospitalisation, followed 20 days later by the appearance of another 2 swelling in the homolateral

supraclavicular area (level V). The rapid evolution of the adenopathy, despite immediate treatment with anti-inflammatory drugs (oral flurbiprofen), led the primary care physician to hospitalise the patient.
The physical examination revealed, in the absence of other clinical signs of importance, a voluminous swelling located in the right rear mandibular angle, the edges of which were irregular. The mass was of hard parenchymatous consistency, slightly painful upon palpation, hypomobile in the deeper levels, which had rapidly reached 6 cm in diameter, and a lateral neck polyadenitis more pronounced on the right, in correspondence to the supraclavicular area.
Blood tests, carried out, upon admission, revealed only an increase in the Erythrocyte Sedimentation Rate (ESR), whereas tests to detect antibodies against Toxoplasma, Measles, Cytomegalovirus, Epstein-Barr virus and HIV, as well as the tuberculin skin test, gave negative results.
Contrast enhanced computed tomography (CT) of the neck revealed the presence, in the bilateral lateral neck area, of "numerous hyperdense lesions, some of which colliquated, in part grouped together in a single mass with polycyclic margins, characteristic of lymphadenopathies". The latter appeared to be 'more numerous and voluminous in the right lateral neck site, where they reached from the rear mandibular angle region to the supraclavicular region', thus confirming the clinical finding. The radiologist referred to a diagnosis of 'suspected' lympho-proliferative disease'.
On the basis of clinical and instrumental findings, a fine needle aspiration biopsy (FNAB) was performed. Results failed to provide useful diagnostic information and it was, therefore, necessary to perform a lymph node biopsy in the right lateral neck area.
Histological examination of 4 adjacent lymph nodes revealed a well-preserved general architecture, in

Fig. 1. Right lateral neck lymph node: areas of ischaemic necrosis in paracortical site [➛]. (Haematoxylin-eosin, 120 X).

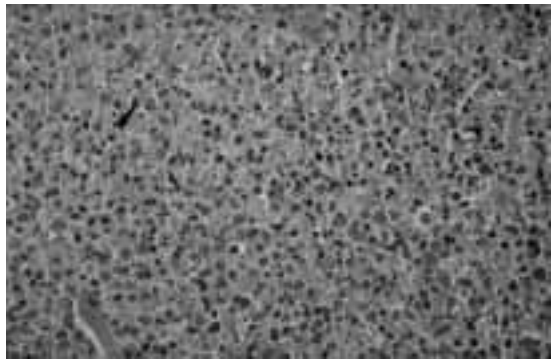

Fig. 2. Higher magnification reveals presence of intravenous fibrin deposits in necrotic areas [➛]. (Haematoxylin-eosin), 240 X).

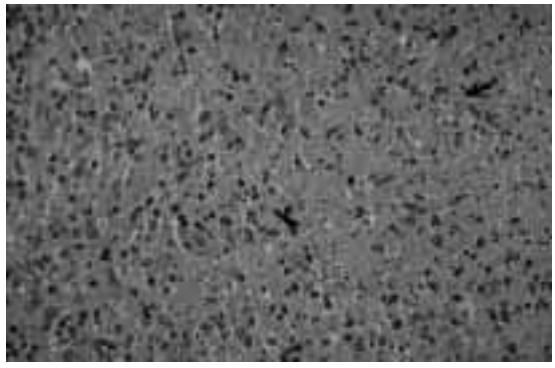

Fig. 3. Necrotic area with abundant nuclear debris, indicating karyorexis, and histiocytes [➛]. No granulocytes. Venule walls have thickened and intensely eosinophil appearance [↑] (Haematoxylin-eosin, 480 X).

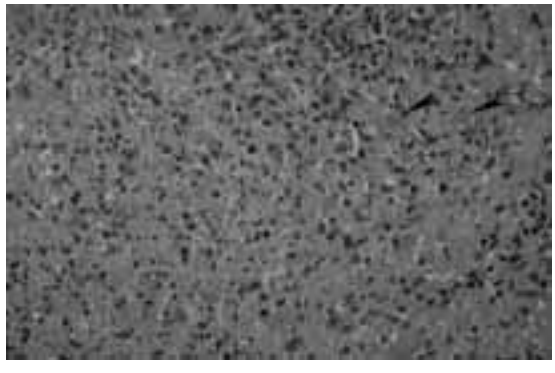

Fig. 4. Presence of cells with clear, nucleolated nucleus, and abundant cytoplasm (plasmocytoid monocytes) within an area of necrosis [➛]. (Haematoxylin-eosin, 480 X).

which multifocal areas of necrosis with a central deposit of fibrin and abundant nuclear debris (Fig. 1) were visible in the paracortical area (Fig. 2). No granulocytes were present (Fig. 3). The necrotic areas were surrounded by marked proliferation of plasmocytoid monocytes (Fig. 4) which, at immunohistochemical examination, revealed weak positivity for CD43 and CD68; histiocytes positive to myeloperoxidasis were also present.
The characteristic absence of polymorphonucleates, together with the presence of a proliferation of plasmocytoid monocytes mixed with the necrosis in the paracortical site, prompted the definition of the lesion as necrotising non-suppurative lymphadenitis due to Kikuchi-Fujimoto lymphadenitis.
The patient, therefore, underwent anti-inflammatory (oral nimesulide) and antibiotic (piperacilline 2 g b.i.d. i.m.) treatment and was monitored until the symptoms disappeared, about 20 days later.
It was possible, at 18 months' follow-up, to exclude recurrence of the disease.

Discussion

KFD, a disease frequently found in Oriental countries, was first reported in the literature in 1972 in Japan [8 14]. Tanaka et al. [22] recently advanced the hypothesis that the higher incidence observed in Asiatics might be due to a genetic factor, corresponding to an allele of the histocompatibility HLA class II system detected with a statistically significant frequency in the DNA of Japanese patients presenting the disease.
The aetiology still remains to be defined, however, the hypothesis advanced, so far, suggests that a viral agent may be involved [5 13 15]. This would trigger a hyperimmune reaction resulting in polyclonal activation of T lymphocytes with a cytotoxic action [7 19]. Albeit, recent studies [11 12] have excluded the presence of a viral genoma in the cells of lymph nodes involved in KFD. Thus, it has been suggested that the triggering factor could be a not well-defined super-antigen of a proteic nature which, binding to the T lymphocyte receptors, would determine activation [4].
The pathogenetic role of impaired function of the immune system is, moreover, supported by the possible association of KFD with systemic erythematosus lupus [6] or with other autoimmune diseases [2].
From a clinical point of view, the symptoms most frequently associated with lymphadenomegaly are asthenia, fever, sometimes a slight weight loss and, as far as concerns blood tests, neutropenia with lymphocytosis is often observed and, as in the case described here, an increase of ESR.
These are, therefore, non specific, non pathognomonic symptoms which, together with the mode of onset which is common to various infectious and neoplastic diseases involving the lymph node system, account for the difficulties encountered in the diagnosis of KFD and stress the importance of differential diagnosis. In this respect, it is worthwhile stressing that adenopathy, in the cervical district, may be not only the site of metastases resulting from neoplastic lesions in the head and neck but also "early sentinels of neoplastic dissemination due to tumours situated in various, and sometimes distant, organs" [18].
Bearing in mind these considerations, it becomes clear that it is necessary, in order to proceed with an appropriate therapeutic approach, to rapidly reach a diagnosis and, thus, avoid underestimating the condition, since KFD may, even if only rarely, have fatal consequences [3].
Moreover, it has been reported that some patients presenting KFD have been submitted to chemotherapy following an erroneous diagnosis of lymphoma [17].
From a diagnostic viewpoint, lymph node biopsy is mandatory, in our opinion, and thus from the histological findings, which may include immuno-histochemical investigation in cases that are difficult to interpret, whilst FNAB does not always provide reliable data [16 23 24].
Symptomatic treatment is carried out using corticosteroids or non-steroidal anti-inflammatory drugs.
Prognosis, which is constantly favourable, is characterised by regression of lymphadenopathy within a few months, even if cases of recurrence have been reported after a considerable period of time [1 21].

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