Case report

Subglottic stenosis in an HIV positive patient: an exceptional form of clinical presentation in Kaposi’s sarcoma

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Abstract

The case of a 29-year-old HIV positive male patient suffering from a Kaposi’s sarcoma exclusively located in the proximal third of the trachea and subglottic region is presented. The patient was found to have included an obstruction of the upper airway. A characteristic endoscopic appearance led to the final diagnosis. A combined treatment with Nd-YAG laser endoscopic resection and laringotracheal irradiation was performed. Pathological examination confirmed Kaposi’s sarcoma. Copyright © 1997 Elsevier Science B.V.

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1. Introduction

Kaposi’s sarcoma is the most frequent neoplasm in patients with AIDS [6]. It is 300 times more frequently seen in this group of patients than in patients with immunosuppression of other causes and 20,000 times more frequent than in the normal population [6]. Fifteen percent of AIDS patients suffer from Kaposi’s sarcoma, most of them being males. Prevalence figures are 1% for young hemophiliacs and 21% among homosexual or bisexual males [1]. It is less frequent among heterosexuals with AIDS, as the later group of patients represent only 5% of AIDS patients. The incidence is similar among male and female patients in this group [1,4].

Kaposi’s sarcoma described in AIDS patients is usually located not only into the skin or lymph nodes but also in the oral and pharyngeal mucosae, gastrointestinal tract and less frequently in the larynx, tracheobronchial tree and lungs. Bronchopulmonary involvement represents between 3 and 13% of all AIDS patients and up to 32% in those patients with associated cutaneous Kaposi’s sarcoma [2,3,9]. The endobronchial location and its endotracheal extension are not rare, however they are almost always associated with extensive pulmonary involvement in patients with cutaneous lesions or concomitant nodal involvement [5,7].

2. Case report

A 29-year-old male heterosexual patient, addict to intravenous drugs and with positive serology for the human immunodeficiency virus (HIV) since 1984, was admitted because of dyspnoea, non-productive cough, stridor and confusion for several days. On physical examination it was apparent an eczema over the face and scalp and oropharyngeal candidiasis. The respiratory rate was 40 rpm and rough stridor was easily heard. The heart rate was 120 bpm but the remainder...
of the examination showed no significant data. The diagnosis of upper airway obstruction was made and arterial blood sample showed the following values: pH 7.40, Pa O₂ 68 mmHg, Pa CO₂ 36 mmHg. The chest X-ray was normal. The red blood cell count was $4.7 \times 10^6$, the platelet count was 133 000 and the white count was 3950 with normal differential. The T₄ lymphocytes count was 1.5% (60 cells/mm³), the CD8 73% and the T₄/T₈ ratio was 0.02. The serologic tests to establish Toxoplasma and Cytomegalovirus infection were negative. Indirect laringoscopy was performed showing a severe stenosis of the tracheal lumen below the chordae. An endoscopic flexible bronchoscopic examination showed a bleeding purplish polypoid mass, located immediately below the chordae and occupying the subglottic circumference and proximal trachea with a luminal reduction larger than 50% (Fig. 1). No biopsy samples were taken because of the high risk of active bleeding. The remaining of the tracheobronchial tree was normal. The cytology did not show atypical cells and the culture was positive for Candida Albicans and enterococcus. The Lowenstein culture and Ziehl-Nielsen were all negative. Cranial and cervical computed tomography scanning cervical scan only showed an annular solid subglottic stenosis of the upper third of the trachea located in the lateral wall of the trachea (Fig. 2). Computed tomography of the chest was normal.

After endoscopic Nd-YAG laser resection (Fig. 3), laringotracheal irradiation up to a total dose of 30 Gy in sequential doses of 200 cGy. The application of ND-YAG laser was performed under general anesthesia with spontaneous ventilation, via a Dumon rigid tracheobronchoscope. Tracheostomy was never needed in this case. The tissue for pathological examination was obtained with a biopsy forceps during rigid tracheoscopy. Pathological examination confirmed the suspicion of Kaposi’s sarcoma. Endoscopic control at 3 and 6 months showed no reduction of the tracheal lumen. The patient is currently symptom-free at 9 months after resection.
3. Comment

Subglottic and tracheal location of Kaposi’s sarcoma in a positive HIV patient is almost exceptional and especially, as in the present case, without associated cutaneous lesions. The form of clinical presentation and the absence of roentgenographic, functional and endoscopic data allowed us to consider a limited involvement of the subglottic region and proximal trachea.

Endoscopic findings were important at the time of establishing the diagnosis. No attempt at endoscopic biopsy was performed because of its low sensitivity [2,5,8] and to the high risk of bleeding, as it has been reported by Pitchenik in 1985 [8] when he first described endoscopic and pathological findings of Kaposi’s sarcoma within the tracheobronchial tree.

Local laser resection and radiation of the laringotracheal region were successful as it has been confirmed by serial endoscopies at 3 and 6 months.

References