Paraneoplastic polyarthritis as the first manifestation of lingual carcinoma

Andrea Briones-Figueroa¹, Walter Alberto Sifuentes-Giraldo¹, Rosario Carrillo-Gijón², José Luis Morell-Hita¹

Abstract

Paraneoplastic polyarthritis is an inflammatory arthritis, is usually seronegative, and has a temporal and pathophysiological relationship with an underlying malignancy. Although head and neck tumors may be a cause of paraneoplastic polyarthritis, its association with tongue carcinoma has not been previously reported. We present the case of a 69-year-old man who was a former smoker and presented with polyarthritis since 2 months in the wrists, proximal interphalangeal joints, knees, and elbows, with increased levels of acute-phase reactants; negativity for rheumatoid factor, anticitrullinated cyclic peptide antibody, and antinuclear antibody; and negative results for crystals and microorganisms in the synovial fluid. Cervical computed tomography and posterior rhinoscopy were performed, which detected an asymptomatic lesion on the base of the tongue, whose biopsy was compatible with nonkeratinizing squamous cell carcinoma. Polyarthritis did not respond to glucocorticoids at medium doses (oral prednisone 20 mg/day) but progressively resolved after the initiation of antineoplastic therapy.

Keywords: Paraneoplastic polyarthritis, paraneoplastic syndrome, tongue carcinoma, head and neck neoplasms

Introduction

Paraneoplastic polyarthritis (PP) or carcinomatous polyarthritis is an inflammatory arthritis, is usually seronegative, and has a temporal and pathophysiological relationship with an underlying malignancy, which usually corresponds to solid tumors, and less frequently, to hematological neoplasms (1, 2). Although head and neck tumors may be a cause of PP (3, 4), its association with tongue carcinoma (TC) has not been reported. We present a case of PP as an initial manifestation of CL.

Case Presentation

A 69-year-old man consulted for pain and swelling in the right wrist of sudden onset and 2 months of evolution, which extended to contralateral wrist, proximal interphalangeal (PIP) joints 2, 3, and 5 of the right hand, knees, and elbows, with increased levels of acute-phase reactants; negativity for rheumatoid factor, anticitrullinated cyclic peptide antibody, and antinuclear antibody; and negative results for crystals and microorganisms in the synovial fluid. Cervical computed tomography and posterior rhinoscopy were performed, which detected an asymptomatic lesion on the base of the tongue, whose biopsy was compatible with nonkeratinizing squamous cell carcinoma. Polyarthritis did not respond to glucocorticoids at medium doses (oral prednisone 20 mg/day) but progressively resolved after the initiation of antineoplastic therapy.
Swelling in the wrists and right proximal interphalangeal joints 2, 3 and 5 in relation to synovitis in these locations.

Discussion
Paraneoplastic syndrome (PS), including PP, is characterized by the following: 1) occurs during the course of a malignancy or precedes it, 2) symptoms do not arise from tumor invasion or compression, and 3) the clinical picture improves with the treatment of the underlying neoplasm (5). Caldwell and McCallum identified the key features of PP, which include a close temporal relationship arthritis/neoplasia (12 months), advanced age, asymmetric joint involvement, sudden onset, predominance of lower extremities respecting hands and wrists, absence of RF, rheumatoid nodules and radiographic erosions, absence of a family history of rheumatic disease, and nonspecific synovial histopathology (6), all of which were present in our case, except symmetry and hand involvement, which have also been described in some patients with PP (2). Its physiopathology is unknown, suggesting the participation of immunocomplexes and T lymphocytes with cross-reactivity against synovial antigens (1). PP responds poorly to treatment with non-steroidal anti-inflammatory drugs, glucocorticoids, and disease-modifying antirheumatic drugs, generally achieving its resolution with the treatment of the underlying neoplasm, although tumor recurrence is not usually associated with reappearance of arthritis (1, 2). PP has been reported as a manifestation of head and neck tumors, including laryngeal carcinoma (6), hypopharyngeal (4), and laryngo-pharyngeal (7), but not TC, and this neoplasm has been associated with other PSs, such as dermatomyositis, autoimmune retinopathy, subacute cerebellar degeneration, thrombophlebitis, and hypercalcemia (8-10). In our patient, the suspicion of PP led to the diagnosis of TC because it did not manifest direct symptoms of the tumor and was not accessible on physical examination; thus, it was detected in the complementary tests.

Conclusion
Head and neck tumors, including TC, may be a cause of PP and may be the initial manifestation in some cases. However, these neoplasms are not always evident on physical examination; hence, they must be considered, especially in patients with key characteristics of PP.

Peer-review: Externally peer-reviewed.


Conflict of Interest: The authors have no conflict of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

References
4. Bajens LW, Manni JJ. Paraneoplastic syndromes in patients with primary malignancies of the head and neck. Four cases and a review of the literature. Eur Arch Otorhinolaryngol 2006; 263: 32-6. [CrossRef]