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CASE REPORT

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Paraneoplastic giant cell arteritis and prostate cancer: A case report of a not common association

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Abstract

GCA is not always a linear diagnosis. Rarely reported as a paraneoplastic condition when associated with solid tumors, the available cases are associated with poor response to corticosteroids.

KEYWORDS

giant cell arteritis, paraneoplastic syndrome, prostate cancer, vasculitis

1 | INTRODUCTION

Giant cell arteritis (GCA) is rarely associated with cancer. The association between paraneoplastic vasculitis and tumors appears to be more frequent with hematologic cancers. The authors report the case of 83-year-old Caucasian man, diagnosed with prostatic adenocarcinoma, who developed a paraneoplastic GCA responsive to corticosteroids associated with disease progression.

Giant cell arteritis (GCA) usually affects people over 50 years of age. This systemic vasculitis affects large- and middle-size vessels, and the humoral and cellular immune systems have been implicated in the pathogenesis.[1] The diagnosis is established by temporal artery biopsy that reveals an inflammatory infiltrate with multinucleated giant cells in 40% to 50% of the cases. The temporal ultrasonography with Doppler of the temporal arteries showing a segmental edematous halo has a high sensitivity and specificity, and the diagnosis can be made with this technique.[1] There is evidence that some auto-immune diseases have some relationship with certain types of cancer, mostly hematologic cancers.[2] Some types of vasculitis are more prone to be related with cancer, but this relationship is rare and paraneoplastic vasculitis represents only 5%.[3] This association has been described mostly with small vessel vasculitis or leukocytoclastic vasculitis.[4] Its appearance may precede or overlap the cancer diagnosis, or herald disease progression.[3]

2 | CASE REPORT

The authors report a case of a 73-year-old Caucasian male with background history of type 2 diabetes and arterial hypertension diagnosed with prostatic adenocarcinoma in December 2018. Radical prostatectomy was performed, and the patient was started on hormone therapy with cyproterone and adjuvant radiotherapy (March 2019). He had 1-month history of night sweats and headache and 1-week history of moderate, nonirradiating pain in the anterior thighs and low-grade fever. At examination, the patient was pale, sweaty and had a grade 2/5 panfocal heart murmur. Laboratory tests revealed normocytic normochromic anemia, erythrocyte sedimentation rate (ESR), transaminases, C-reactive protein (CRP), and procalcitonin. Cultures were drowned, and empirical antibiotics were started. The head CT scan and lumbar CT scan were unremarkable. Blood cultures and serologic tests for atypical agents were negative. A transthoracic echocardiogram was performed and showed no valvular vegetations.

A thoracic-abdominal-pelvic CT scan was performed and showed only moderate hepatomegaly. After ten days of empirical antibiotic with doxycycline and gentamicin, the patient maintained low-grade fever and pain in the anterior thighs with worsening of anemia, SR, and transaminases. The CRP and procalcitonin remained unchanged, and the multidisciplinary team decided to suspend local radiotherapy.

A bone scintigram was performed and suggested the hypothesis of aseptic femoral head necrosis that was excluded with hip MRI. With development of mandibular claudication during the hospital stay, a Doppler ultrasound of the temporal arteries was performed and revealed periluminal hypoechogenic halo reflecting arterial wall edema more pronounced in the left temporal artery (Figure 1).

The patient was started on 1 mg/kg of prednisolone with clinical improvement at the first 48 hours and resolution of laboratory abnormalities. It was not possible to perform the temporal artery biopsy until the 10th day of therapy, and it showed only slight lymphocytic infiltration.

Local radiotherapy was restarted, and the patient was discharged home.

Three months later, the patient restarted bilateral hip pain and a lumbosacral spine MRI was performed and revealed new osteoblastic lesions in S1, S2, and S3 compatible with bone metastasis.

3 | DISCUSSION

The association between vasculitis and cancer is not well defined. It appears to be an immune response disturbance in GCA that might predispose to cancer or relapsing disease.[4] The available studies show that this association is more frequently found in hematologic cancers and to a lesser extent in solid cancers (lung, prostate, colon, breast, and kidney).[4] Ji followed 3941 patients admitted with CGA and polymyalgia rheumatica and found an incidence excess of 19% of cancer in those patients, mostly in the first year after the diagnosis but found no excess of mortality.[5] In a retrospective study, Deshayes did not found association between any particular cancer type and GCA but found that only 4% ran a paraneoplastic course.[2] Solans-Laqué stated that tumor recurrence should be suspected in older patients with new-onset vasculitis or relapsing vasculitis.[3]

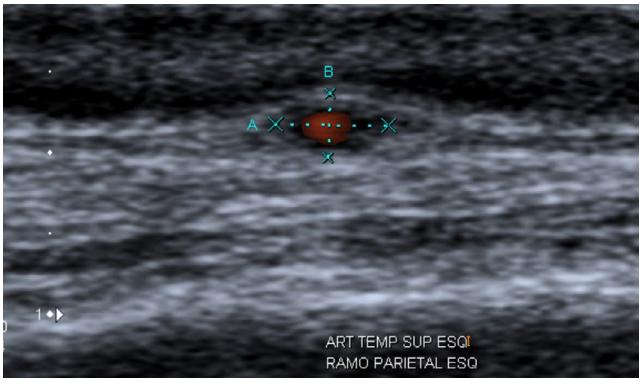

FIGURE 1 Temporal echo-Doppler of left temporal artery showing an edematous halo

4 | CONCLUSION

The association between vasculitis and cancer is not well understood but it appears that all types of vasculitis may play a role in cancer development or progression. Large-vessel vasculitis as GCA is rarely described as a paraneoplastic syndrome in solid tumors and is frequently associated with poor response to corticosteroids. This case shows us that clinicians should keep a high index of suspicion, even in cases of good treatment response and be aware of possible tumor diagnosis or relapse mostly in the first year of vasculitis diagnosis.

ACKNOWLEDGMENT

This study was published with written consent of the patient.

CONFLICT OF INTEREST

Non declared.

AUTHOR CONTRIBUTION

CF and MA: were the attending physicians and major contributors in writing the manuscript. ER, RS, and OV: were part of the attending physicians team and were contributors to diagnosis. All authors read and approved the final manuscript.

ETHICAL APPROVAL

The case report needs no additional consent from Ethics Committee.

DATA AVAILABILITY STATEMENT

The datasets generated during and/or analyzed during the current study are available in the Pubmed repository.

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