

Worsening solid facial edema: An unusual case of angiosarcoma



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INTRODUCTION

Angiosarcomas account for approximately 2% of all soft tissue sarcomas,¹ and 804 cases of cutaneous angiosarcoma were reported in the Surveillance, Epidemiology, and End Results (SEER) registry from 1973-2014.² Cutaneous angiosarcoma can present on sun-damaged skin with a predilection for the head and neck and also can be seen in prior radiation sites or in cases of lymphedema. Although the clinical presentations are variable, ranging from purpuric patches to diffuse erythematous plaques with concurrent ulcerations,³ we report an unusual presentation of cutaneous angiosarcoma as hemifacial solid edema.

CASE REPORT

A man in his 70s was referred for evaluation of worsening right-sided facial edema of 4 months' duration. At initial onset, he experienced fever and generalized malaise, which resolved. The edema steadily progressed to encompass the entire right side of his face with serous drainage that soaked through his pillow at night. He denied pruritus, dysphagia, or difficulty breathing. He also noted a 14-pound weight loss along with a decreased appetite. He had completed 2 courses of clindamycin and was taking cephalexin, 500 mg twice daily, for a suspected infectious etiology. He experienced only mild improvement. On physical examination, he had erythematous, nonpitting, and indurated edema involving his right eyelid, cheek, postauricular skin, scalp, and anterior neck (Fig 1). Serous drainage on the right malar area and a superficial erosion on his postauricular skin was noted. The area was warm and tender to palpation. Flexible laryngoscopy did not find any abnormalities in the pharynx and larynx.

Abbreviation used:

CT: computed tomography

The subacute onset of hemifacial erythema and edema was concerning for vascular or lymphatic obstruction. A neck ultrasound scan did not show thrombosis of the neck veins. Head computed tomography (CT) scan with contrast found patent vascular structures and diffuse skin and soft tissue thickening on the right side with several small right sided enlarged lymph nodes. A biopsy of the right postauricular skin found acanthosis with underlying pandermal proliferation of atypical hyperchromatic CD31/D2-40⁺ endothelial cells forming irregular jagged vascular spaces (Fig 2) consistent with angiosarcoma. A tissue culture grew *Staphylococcus aureus*, and the patient was started on a 14-day course of doxycycline, 100 mg twice a day, for concurrent infection.

The patient was referred to the hematology/oncology department for further evaluation and treatment. CT scan of the chest, abdomen, and pelvis found pulmonary nodules that were thought to be benign noncalcified nodules and not represent metastatic disease. The lymph nodes previously seen on CT scan were also thought to be reactive and not represent metastatic disease. The patient was not a radiation candidate based the extent of involvement and concern for underlying anatomic structures. He was started on pazopanib, 800 mg daily, and propranolol, 40 mg twice daily. He improved initially, but after 7 weeks the erythema and drainage worsened with spread to the left side of his face and associated bleeding. This was believed

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Fig 1. Clinical photograph shows erythematous plaque with serous drainage involving the right face and neck. **A**, Frontal facial view. **B**, lateral view.

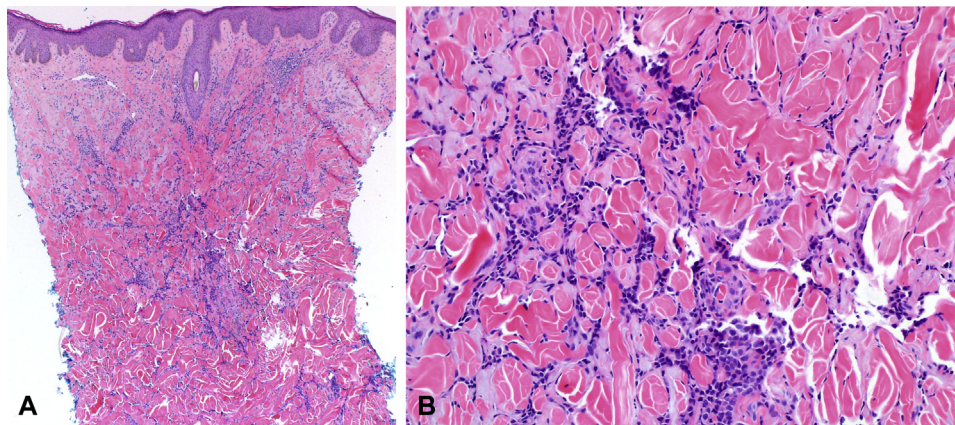


Fig 2. Histopathology shows a broad dermal proliferation of atypical hyperchromatic endothelial cells forming irregular jagged vascular spaces. Hyperchromatic cells were positive for CD31 and D240 (not shown). (**A** and **B**, Hematoxylin-eosin stain; original magnifications: **A**, $\times 4$; **B**, $\times 20$.)

to be progression of the disease, so pazopanib was discontinued, and he started gemcitabine cycles (900 mg/m² on days 1, 8, and 15) with improvement in his disease.

DISCUSSION

We report the extraordinary clinical presentation of cutaneous angiosarcoma as striking unilateral solid facial edema. Although angiosarcomas more commonly present with purpuric plaques, facial edema is an uncommon presentation. Few reports exist describing the edema as generalized facial

edema,⁴ unilateral facial edema,⁵ and unilateral orbital edema.⁶ The clinical differential diagnosis includes obstruction of blood vessels and lymphatics or granulomatous rosacea. Histopathology was required to make the diagnosis in this case and found the typical features of angiosarcoma, which range from infiltrating irregular vasculature to poorly formed vasculature with concurrent poorly differentiated cells.³ Endothelial cells will typically be positive with the immunohistochemical stain CD31 and may also stain positive for CD34, vascular endothelial growth factor, and factor VII.³

Because cutaneous angiosarcoma can be a very aggressive tumor, early diagnosis is important. Prognosis depends on several factors, and higher survival rates occur in younger patients, trunk location compared with head and neck location, and earlier-stage tumors.^{1,2} Depth of invasion is also an important prognostic factor with greater invasion portending worse prognosis.¹ The average 5-year survival rate is approximately 30%.³

Treatment for angiosarcoma is evolving. Treatment modalities include wide local excision for amenable tumors, which was not the case for our patient.^{3,7} Radiation and chemotherapy are used for extensive disease or in the adjuvant or neoadjuvant setting. Commonly used agents for chemotherapy treatment have historically been paclitaxel or docetaxel.^{1,7} Newer evidence shows encouraging results for targeted immunotherapy including tyrosine kinase inhibitors⁷ and PD1 inhibitors,⁸ especially in taxane-resistant disease. The tyrosine kinase inhibitor pazopanib was the first line of treatment chosen for our patient, and propranolol also was used as β -blockade, which has been shown to reduce proliferation of angiosarcomas and has low risk of side effects.⁹ After tumor progression, our patient was switched to gemcitabine, which has promising results as a single agent in advanced angiosarcoma after failure of other methods of treatment.¹⁰ He is currently tolerating his treatment well, and tumor progression has slowed.

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