

Fractures of the atlas vertebra are rare in children. A history of trauma combined with the classical signs of neck pain, head tilt, diminished cervical range of motion and cervical muscle stiffness should alert the clinician to the possibility of an atlas fracture. Initial radiographs may be equivocal; further images should be made with CT and MRI if clinical suspicion is high. Imaging may also be used to verify post-immobilization reduction of the fracture. For stable fractures, excellent functional results may be obtained

with immobilization by external fixation.

**Competing interests:** None declared.

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## Melanoma erysipeloides

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A 63-year-old man went to his family physician with an axillary mass that had grown over the preceding year. An incisional biopsy showed a poorly differentiated tumour that stained positive for S-100 protein and negative for CD45, HMB and cytokeratin. The diagnosis was metastatic melanoma from an unknown primary.

When the patient was seen in the melanoma clinic 2 weeks later, the mass had grown somewhat and developed some reddening and local tenderness close to the biopsy site. On physical examination, the patient was afebrile and had a 15-cm left axillary mass with erythema extending around the biopsy site. The mass was firm and mobile; no other lymphadenopathy was found in the neck, right axilla or groin. No primary melanoma lesion was discovered. A complete staging work-up was arranged, and the patient booked for an axillary dissection.

Ten days later, the patient arrived at

the emergency department with markedly increased pain and erythema to the left axillary mass. The mass size had increased to 21 cm, and the erythema spread to completely cover the mass (Fig. 1, left). All vital signs and laboratory values were normal. An urgent wide local excision with a left axillary-node dissection was performed (Fig. 1, right). A fine-needle aspiration biopsy found no evidence of infection within the mass. Removal of the tumour required sacrifice of the pectoralis major and thoracodorsal vessels.

The final pathologic diagnosis was metastatic melanoma involving the axillary lymph nodes with secondary dermal lymphangiomatosis in the overlying skin (Fig. 2). Immunostain results for S-100, vimentin, HMB-45 and melan-A were all positive. There was no identifiable invasion of the dermal lymphatics in the inflamed skin.

The patient was discharged from the hospital 7 days after surgery and referred

for radiotherapy of the axillary bed. Last seen in follow-up at 15 months, he is still alive, with no recurrent disease.

Interestingly, an MRI done 3 months after diagnosis showed a nodular 1-cm mass in his left posterior frontal gyrus, with some perifocal edema. It was hyperintense on T<sub>2</sub>-weighted images; it looked like a possible metastasis. After resection, pathology revealed this lesion to be nothing more than reactive gliosis, with no evidence of malignancy. Follow-up scan results have likewise all been negative.

#### Discussion

Inflammatory carcinoma is a well-known, although uncommon, cutaneous manifestation of metastatic malignancy. Its classical presentation involves an erythematous, indurated and tender area of skin overlying dermal lymphatic involvement by metastatic tumour.<sup>1</sup> It is most commonly associated with carcinoma of

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FIG. 1. A patient with secondary metastatic melanoma. A wide local excision (right) was made under emergency conditions.

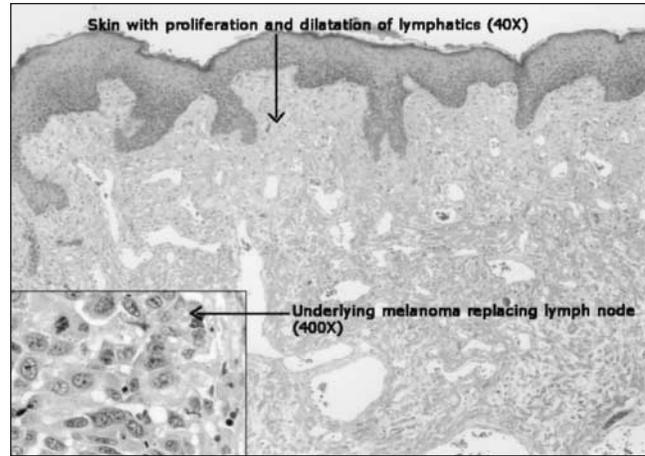


FIG. 2. Thin sections showing involvement of the axillary lymph nodes and dermal lymphangiomas in the overlying skin.

the breast but has been reported in other primary tumours, including those of the pancreas, lung, ovary, rectum, parotid glands, stomach and cervix.<sup>2</sup> Dermal lymphatic invasion by the tumour is thought to be important in the pathogenesis of the overlying inflammatory changes.<sup>3</sup>

Haupt and colleagues<sup>4</sup> were the first to report dermal lymphatic invasion by melanoma underlying skin with an inflammatory appearance. The 2 cases they described were examples of cutaneous erythema and induration in skin overlying dermal lymphatic involvement by a metastatic tumour. Although not grossly involved with tumour, the erythematous skin of both patients showed underlying dermal lymphatic invasion.

To our knowledge, our patient represents the 11th reported case of inflammatory melanoma.

Criteria that may indicate inflamma-

tory melanoma are clinical in nature and include induration of erythema, localization around the primary tumour, pigmented papules within the erythematous area and the absence of systemic parameters of inflammation (elevated erythrocyte sedimentation rate, fever, leukocytosis).<sup>5</sup> Histopathology reports for the cases reviewed varied widely, from no lymphogenic spreading to dermal metastasis. Hence it is still unclear what is necessary to define melanoma as inflammatory, whether melanoma permeation of lymphatics, plugging of dermal lymphatic vessels, or simply a typical clinical presentation. Nevertheless, the development of inflammatory melanoma seems to indicate progressive disease: only 2 of the 10 previously reported patients survived beyond 6 months.<sup>5</sup>

**Competing interests:** None declared.

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