


Metastatic pulmonary malignant melanoma showing a ring-shaped and halo signs

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Keywords

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Key Message

Classically, metastatic tumours are solid, multiple, well-circumscribed, and rarely cavitary. This rare case of metastatic pulmonary malignant melanoma showed a ring-shaped ground-glass opacity and then the halo sign, depending on the disease progression.

Clinical Image

A 66-year-old woman visited our hospital for investigation of ground-glass opacity (GGO) of the right upper lobe (RUL). She had undergone surgical resection of a malignant melanoma localized in the abdominal skin 5 years before, and the follow-up computed tomography (CT) detected a GGO (Fig. 1A). Six months later, the GGO deformed to a ring shape (Fig. 1B), and 22 months later, it became larger and centrally solid with surrounding ground glass, a conventional halo sign (Fig. 1C). Then, a thoracoscopic lobectomy was

performed. Pathologically, large atypical cells with brown pigment proliferated in a solid part, and alveolar epithelia were replaced by melanoma cells, leading to the diagnosis of pulmonary metastases of melanoma (Fig. 2). Classically, metastatic tumours are solid, multiple, well-circumscribed, and rarely cavitary [1,2]. A ring-shaped GGO may be produced by air trapping, with invasion of the tumour into bronchi. Then, the GGO changes into the halo sign, possibly because of replacing airspace with tumour cells. This is a rare case showing a ring-shaped GGO and then the halo sign as a

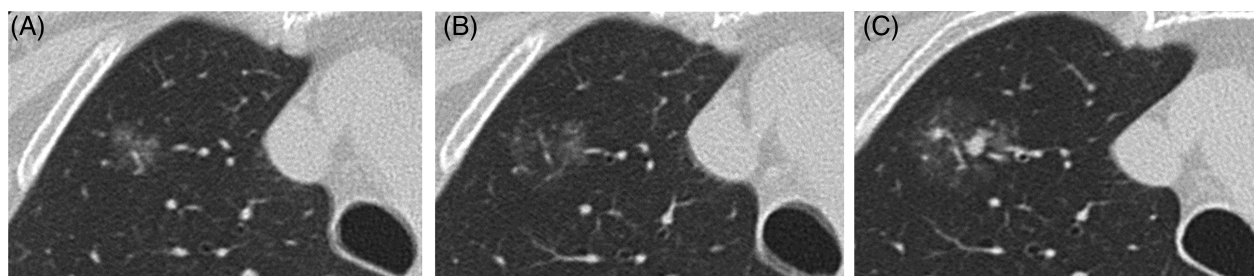


Figure 1. Chest computed tomography (CT) showing initial ground-glass opacity (A), a ring-shaped opacity (B), and the halo sign (C).

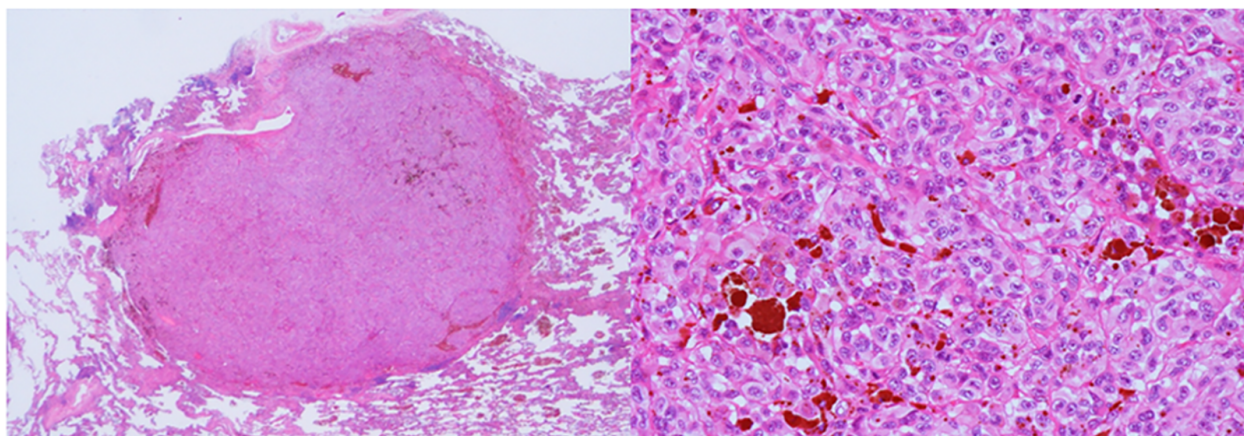


Figure 2. A thoracoscopically lobectomized specimen showing large atypical cells with brown pigment proliferated in a solid part and alveolar epithelia that were replaced by melanoma cells.

pulmonary metastasis from malignant melanoma and its progression.

Disclosure Statement

Appropriate written informed consent was obtained for publication of this case report and accompanying images.

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