

# Idelalisib-induced pneumonitis

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## DESCRIPTION

A woman in her 40s with relapsed follicular lymphoma presented with a few days history of shortness of breath and cough producing yellow sputum. There were no reported toxic exposures or contacts with sick people. Medications included idelalisib initiated 5 months ago and a multivitamin. Vital signs were notable for tachycardia and tachypnoea, oxygen saturation was 89% on room air. The alveolar–arterial gradient was 50 mm Hg (expected for age, 16 mm Hg). Examination revealed diffuse crackles in bilateral lung fields. Routine biochemical investigations were unremarkable and multiple infectious studies were negative. Chest X-ray showed bilateral interstitial infiltrates. A CT scan of the chest demonstrated bilateral diffuse groundglass opacities and peribronchial thickening (figure 1A). Given the overall clinical picture, a diagnosis of acute lung injury secondary to idelalisib-induced pneumonitis was considered. Idelalisib was discontinued and she was treated with empiric antibiotics (until the cultures returned negative). High-dose intravenous steroids were initiated with resolution of symptoms and she was discharged home with a 3 week prednisone taper. A repeat CT scan 3 months later showed complete resolution of lung infiltrates (figure 1B). She opted for not restarting idelalisib therapy.

Idelalisib is a molecular agent approved for the treatment of relapsed chronic lymphocytic leukemia/small lymphocytic lymphoma and relapsed follicular B-cell non-Hodgkin lymphoma.<sup>1</sup> By potentially interfering with the regulatory immune system, it has been associated with causing colitis, dermatitis, transaminitis and pneumonitis.<sup>1</sup> Prescribing information recommends that patients presenting with cough, dyspnoea, hypoxia, interstitial infiltrates or a decline in oxygen saturation by >5% should be evaluated for pneumonitis.<sup>2</sup> Idelalisib is considered to have caused pneumonitis

in ~2% of patients who were being treated with this drug for relapsed indolent lymphoma, in the original phase 2 clinical trial.<sup>3</sup> Idelalisib treatment should be suspended if pneumonitis is suspected. Corticosteroids have been successful in treating pneumonitis in clinical trials.

## Learning points

- ▶ Idelalisib is a selective, phosphatidylinositol 3-kinase delta (PI3Kδ) inhibitor approved for the treatment of relapsed chronic lymphocytic leukemia/small lymphocytic lymphoma and relapsed follicular B-cell non-Hodgkin lymphoma.
- ▶ Although it is a rare cause, Idelalisib is known to be associated with severe pneumonitis. Discontinuation of the drug and initiating high-dose corticosteroids might help to reverse this serious and sometimes fatal adverse event.

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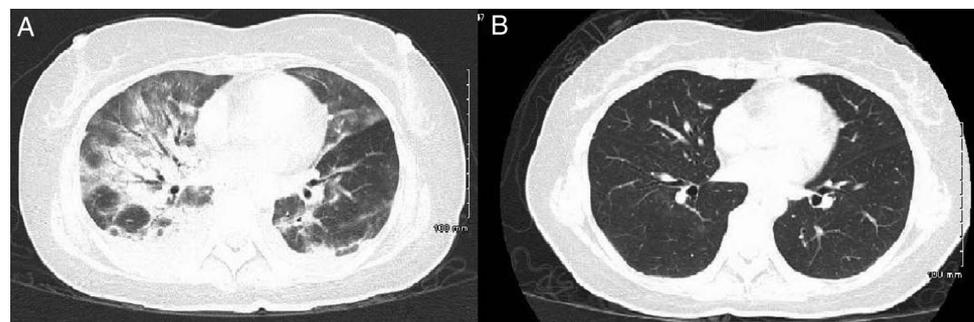
**Competing interests** None declared.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

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**Figure 1** CT scans of the chest at presentation (A) showing diffuse groundglass opacities and peribronchial thickening with resolution of these infiltrates 3 months later after therapy with corticosteroids (B).



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