THE NEW ZEALAND MEDICAL JOURNAL
Journal of the New Zealand Medical Association

Sulphasalazine lung toxicity: report of two cases

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Sulphasalazine has been used widely for treatment of ulcerative colitis as an anti-inflammatory agent since the 1940s. Later on, its use was extended to treat rheumatoid arthritis as a disease-modifying agent (DMARD[1]).

Sulphasalazine may cause clinically important adverse effects such as nausea, vomiting, headache, skin rashes, fever, arthralgias, abnormal liver function tests and less commonly agranulocytosis, haemolytic anaemia and neurotoxicity.[1,2] Pulmonary toxicity is less common and there are only few reports in the literature.[1,3]

We report findings in two cases of sulphasalazine-induced pulmonary toxicity.

Case 1—A 45-year-old lady with Crohn's disease and bronchiectasis developed enteropathic spondyloarthropathy involving both sacroiliac joints. She was started on sulphalazine as a DMARD. Four weeks later she developed shortness of breath, dry cough and hypoxic respiratory failure. A peripheral blood eosinophil count was normal. A plain radiograph showed bilateral airspace opacification most prominent in the left upper lobe with evidence of bronchiectasis on the right.

The high resolution CT scan (HRCT) demonstrated widespread ground glass opacification especially in the left upper lobe. There were some small centrilobular nodules and appearances were those of an acute hypersensitivity pneumonitis on a background of chronic changes of bronchiectasis (Image A). She was admitted to the intensive care unit for observation and high flow oxygen. She continued to deteriorate on broad-spectrum antibiotic treatment. Sulphasalazine was then discontinued and she was treated with high dose methylprednisolone. She improved clinically over the next few days and returned to her baseline level of functioning after 3 weeks.

Case 2—A 35-year-old lady was recently diagnosed with rheumatoid arthritis. She developed symptoms of breathlessness, dry cough and mild fever 10 days after commencing sulphasalazine. On discontinuation of sulphasalazine her symptoms improved. Sulphasalazine was recommenced one week later and she developed similar symptoms with more severe breathlessness after 4 days. Eosinophil counts were normal in peripheral blood and BAL.

The chest radiograph showed bibasal consolidation with septal thickening and thickening of the fissures. The HRCT demonstrated dense bibasal consolidation with thickening of the interlobular fissures throughout the lungs but worse at the bases. There were small pleural and pericardial effusions. The appearances were of an acute interstitial pneumonia with a differential diagnosis of infection (Image B). No infective aetiology was identified on culture of sputum or bronchial washings. Sulphasalazine was stopped but symptomatic improvement was slow. She was given a short course of oral corticosteroids with rapid resolution of symptoms.

Image A

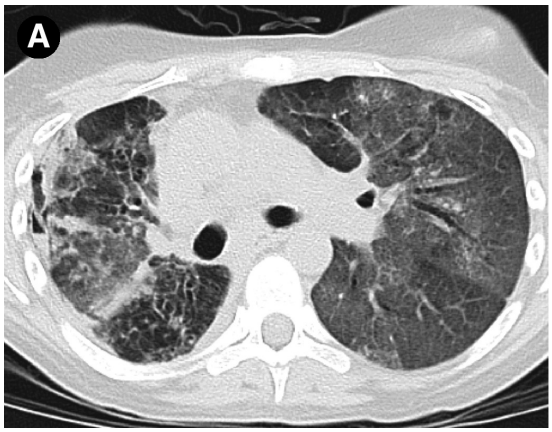
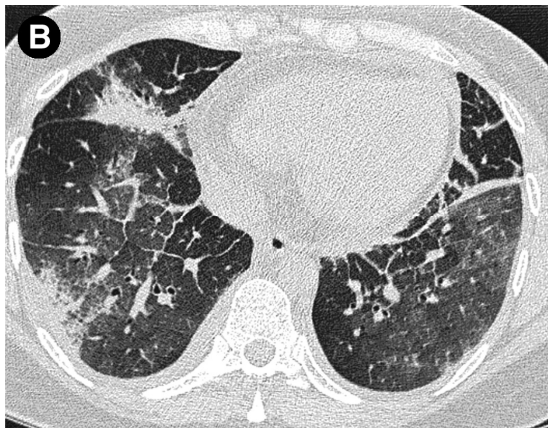


Image B



Discussion

Pulmonary toxicity from sulphasalazine is an uncommon but potentially serious adverse effect. The exact mechanism of sulphasalazine pulmonary toxicity is unknown. Various pulmonary pathologies have been reported including pulmonary eosinophilia, interstitial pneumonia[4] and hypersensitivity pneumonitis.[1] We described cases of hypersensitivity pneumonitis and acute interstitial pneumonia.

Pulmonary toxicity from sulphasalazine should be considered in patients who develop respiratory symptoms and radiographic changes. From our experience, discontinuation of the drug and treatment with corticosteroids facilitate rapid and complete recovery.

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