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LUNG ALERT

Can acetylcysteine slow lung function decline in idiopathic pulmonary fibrosis?

▲ Demedts M, Behr J, Buhl R, *et al* and the IFIGENIA Study Group. High-dose acetylcysteine in idiopathic pulmonary fibrosis. *N Engl J Med* 2005;**353**:2229–42

Efficient treatments in idiopathic pulmonary fibrosis (IPF) are elusive and patients die 3–5 years after diagnosis. The standard treatment for IPF includes prednisolone and azathioprine, but there is little evidence that these drugs alter the progress of the disease. This study suggests that the addition of high dose acetylcysteine to standard treatment with prednisone and azathioprine can slow the rate of lung function deterioration in patients with IPF.

155 patients were randomly assigned to a daily regimen of 1800 mg acetylcysteine or a placebo, with both groups receiving prednisone and azathioprine. The patients had a diagnosis of usual interstitial pneumonia confirmed by high resolution computed tomography and histological findings. At 1 year the rate of loss of carbon monoxide transfer factor and vital capacity was slower in the group receiving acetylcysteine than in the placebo group, with a relative difference of 24% for transfer factor and 9% for vital capacity. There was no difference in patients' symptoms and the study was not powered to show a difference in survival.

Interestingly, patients taking acetylcysteine had a lower rate of myelotoxicity than those taking placebo. This prompted Hunninghake to ask in the accompanying editorial if "the effects of acetylcysteine are not better explained by the drug's prevention of the toxic effects of prednisone and azathioprine". Further studies are needed to determine whether acetylcysteine alone is an option for patients with IPF. This study suggests it should currently be considered as a treatment option in addition to immunosuppressive therapy.

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