

metaphor. The data presented are broadly demographic and may be contrasted with the qualitative study by Smith and Beatie [2] that explored the psychosocial impact of disclosing the diagnosis from observation of family conferences and in-depth interviews.

Bernard Williams describes moral philosophy as '...the philosophical, reflective study of certain values that concern human beings' [3]. A survey of opinion informs neither what is good nor what is right and, perhaps more importantly, does not contribute to the clarification of the moral status of the severely cognitively impaired person. The normative conclusions are not readily derived from the data provided.

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## Reply

SIR—In response to Dr Bourne's letter, we agree that a survey of opinions does not inform us what is moral and good. Morality does not lend itself to statistical analysis. Our study did not draw conclusions in regard to morality and what is 'good' from the data.

What the study showed was that many carers in a clinically representative sample did not think that disclosure of the diagnosis is what they would choose for someone whom they care about. This was particularly the case when the person with dementia had a lower score on the MMSE (and can be supposed to have a lesser degree of autonomy). If it would not be beneficial in someone who is now unable to be autonomous, it could be argued that some carers may not see it as ethical to tell a person with dementia the diagnosis. The study did not intend to form a view whether this decision is good or moral.

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## Nitrofurantoin lung injury

SIR—A recent New Zealand case report of fatal interstitial lung disease resulting from long-term nitrofurantoin treatment [1] highlights the need to be vigilant for pulmonary toxicity of this drug and many others.

Pulmonary hypersensitivity reactions to nitrofurantoin can be life-threatening and nitrofurantoin should be stopped immediately on occurrence of symptoms. Impaired pulmonary function may remain even after cessation of therapy. Deaths as a result of severe hypoxia and of alveolar haemorrhage have been reported [1, 2].

We present a patient on long-term nitrofurantoin treatment for recurrent urinary infections, who developed a clinical picture of interstitial lung disease and improved significantly soon after its discontinuation.

## Case report

A 76-year-old female non-smoker presented with a 6-week history of worsening breathlessness, cough, anorexia and fatigue. She had started a course of nitrofurantoin for a recent urinary tract infection (UTI). Past medical history included hypertension, hypothyroidism and recurrent UTIs.

Her UTIs were treated with nitrofurantoin for 14 months. On presentation, she was tachypnoeic and tachycardic with coarse dry late inspiratory crackles over both lung fields, and there was no evidence of clubbing or cyanosis. The chest radiograph showed patchy abnormal interstitial shadowing involving all lobes consistent with pulmonary fibrosis or pneumonitis. Lung function tests were performed with an FEV1/FVC ratio of 91% (predicted range of 75%). Total gas transfer factor (TLCO) could not be measured because of breathlessness. There was no eosinophilia.

A subsequent high resolution computed tomographic (HRCT) scan of the thorax showed extensive reticular shadowing in both lung fields involving all lobes with associated bronchiectatic changes.

Nitrofurantoin-induced lung disease was suspected, and the causative drug was stopped and the patient commenced on oral steroids. Two weeks later, she had improved significantly, feeling much less breathless and her lung function tests were, if anything, slightly better.

She continued on a reducing dose of prednisolone with general improvement in her condition. The use of steroids in this condition was anecdotal and there was no evidence in critical literature review.

Follow-up chest films proved marked improvement with resolution of shadowing in both lung fields. HRCT also showed marked reduction of parenchymal abnormalities.

## Comment

- As nitrofurantoin is still widely used for recurrent urinary tract infections, knowledge of this drug's potential lung toxicity is essential.
- Vigilance for pulmonary toxicity in patients on long-term nitrofurantoin treatment, who present with cough or shortness of breath, should indicate the need for further investigations including chest X-ray and spirometry.
- Withdrawal of nitrofurantoin and treatment with an oral corticosteroid results in not only improvement of clinical