

Title: Positive Photopatch test to pirfenidone

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Main text:

A 77-year-old man was referred for investigation of a florid itchy rash affecting the face, neck and forearms. The rash started after three months of taking oral pirfenidone for idiopathic pulmonary fibrosis (IPF), following exposure to sunlight. He reported the eruption improved eight days after stopping pirfenidone but recurred within two days of recommencing the medication. There was no reported personal or familial history of atopy.

Physical examination showed symmetrical, erythematous rash on the head, face, 'V' of the chest and both forearms and the back of the hands (Figure 1, S1a-c), with superficial scaling. At the time of patch testing, pirfenidone had been withheld for four weeks, and his skin was clear. Patch testing was performed with the British Standard, cosmetic, fragrance and plant series under occlusion with Finn Chambers (Chemotechnique Diagnostics, Vellinge, Sweden). Photopatch testing was carried out to pirfenidone 801 mg (10%, 1%, 0.1% and 0.01% in aqueous solution) under

occlusion for 2 days and, upon removal, one of the identical series was irradiated with 5Jcm² ultraviolet A; readings were performed according to ICDRG/ESCD criteria on day two (D2) and four (D4) following application of these tests. He was positive to Balsam of Peru 1+ and benzyl alcohol 1+ on D2 and D4. Erythema was observed on D4 to pirfenidone 1% and 10%, suggestive of an irritant reaction (Fig S2). Interestingly, a 1+ reaction was demonstrated to all four concentrations of pirfenidone with photopatch testing (Fig 2).

Discussion:

30% of patients who take pirfenidone develop a rash and 9% reported photosensitivity (1). The role of patch testing in pirfenidone is not known. We present the first case, to our knowledge, of photopatch test positivity to pirfenidone. IPF is a severe, progressive lung disease with a poor prognosis and intolerance to antifibrotic medication is not uncommon. Photopatch testing could be used to confirm a diagnosis of photoallergy and enable a guided, quicker decision to switch to an alternative, such as nintedanib. Referral of patients with photodistributed rashes on pirfenidone should be encouraged so that the role of photopatch testing for patients on systemic treatment can be investigated further.

Reference:

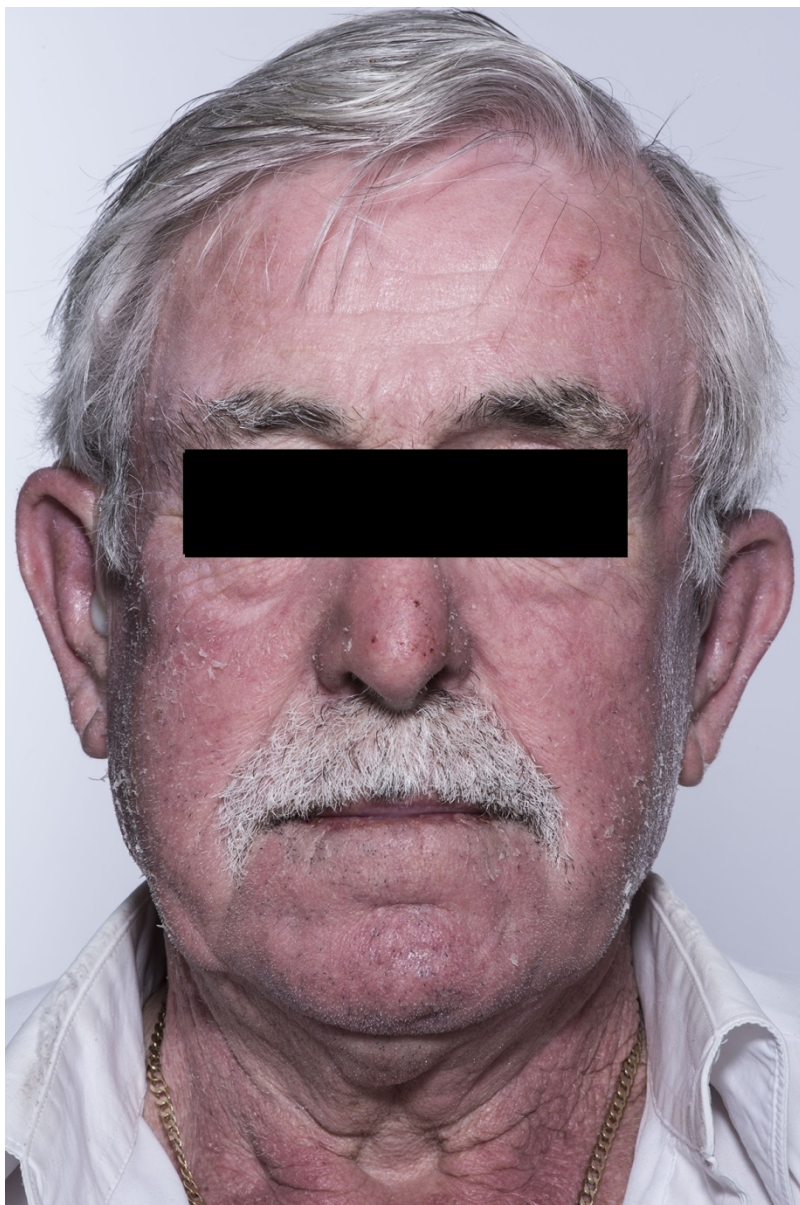
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Figure legends

Fig1. Erythematous rash on the face

Fig 2. Photopatch testing positive (+) reaction to pirfenidone 801 mg (10%, 1%, 0.1% and 0.01% in aqueous solution)











10%

1%

44%

0.01%

1%