

A slightly itchy rash on the hand of a person with type 1 diabetes

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A 42-year-old woman with type 1 diabetes presents to her GP with multiple skin lesions on the back of her hand, which have slowly grown in size.

### Questions

1. Describe this image and what is the diagnosis?
2. What symptoms is she likely to have and what is the association with diabetes?
3. What investigations and treatments are recommended?

### Answers

1. The image shows erythematous annular plaques on the dorsum of the hand. The diagnosis is granuloma annulare. This is a benign, self-limiting, condition affecting the dermis and subcutaneous tissue. It is more commonly seen in children and young adults, but can affect any age group, and is twice as prevalent in women.

The image illustrates localised granuloma annulare which is characterised by multiple skin-coloured or erythematous annular plaques and papules, typically found on the dorsum of the hands or feet, elbows and knees. These lesions can grow up to 5cm in diameter and around half of affected individuals have more than one. Infrequently, these lesions can become widespread on the trunk and extremities, known as generalised granuloma annulare [1-3].

2. Granuloma annulare is usually asymptomatic although in some cases mild pruritis and localised tenderness is described [1-3]. Despite the aetiology being unknown, numerous precipitating factors have been linked, including trauma, insect bites, viral infections, vaccinations, sun exposure, medications and stress [1,2,4].

The relationship between diabetes and granuloma annulare has been much debated. In a retrospective study of 557 people with granuloma annulare, Muhlemann and Williams found that 4% had diabetes, the majority of whom (75%) had type 1 diabetes [1,2,5]. In some cases granuloma annulare presents prior to the diagnosis of diabetes [6,7]. Conversely, several studies have concluded that there is no significant association between granuloma annulare and diabetes, with one prospective study finding normal HbA1c levels in 23 people with granuloma annulare [8].

3. The diagnosis of granuloma annulare is usually clinical although skin biopsy may be helpful if the diagnosis is unclear. Localised granuloma annulare is benign and generally asymptomatic, with most patients not requiring treatment and around 50% resolution within 2 years. In symptomatic cases, proposed therapies include topical or intralesional steroids, cryotherapy, UV light treatment, isotretinoin and antimalarial medications [1-3, 5].

Key points:

1. Granuloma annulare is a benign skin condition which is more common in women and has several subtypes.
2. It is usually asymptomatic, but if symptoms do occur steroid therapy may be helpful.
3. There are conflicting data regarding the link between diabetes and granuloma annulare, with further research required on an association as well as treatment options.

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