

Value of the pathergy test in Behçet's disease

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Introduction

The phenomenon of pathergy, first described in 1937 by Blobner, is well-known among dermatologists. It represents an altered tissue reactivity in response to minor trauma. The pathergy test, a non-specific hypersensitivity skin reaction triggered by a needle stick, is performed to detect this phenomenon. The aberrant reaction is associated with increased cytokine release by dermal or epidermal cells, resulting in perivascular infiltrates commonly observed in histopathological studies. While pathergy has been documented in various diseases, the pathergy test is primarily utilized in the diagnosis of Behçet's Disease (BD). Additionally, it is reported in other conditions, including neutrophilic dermatoses like pyoderma gangrenosum (PG) and Sweet's syndrome. The pathergy test remains a crucial diagnostic criterion for BD. Standardization of methodology and optimized conditions are essential to maximize its sensitivity and specificity.

Material and method

Our study was based on a questionnaire regarding the diagnostic value of the pathergy test in Behçet's disease, conducted in national hospitals in Morocco. The questionnaire was aimed at internal medicine residents in Morocco to gather their perceptions and practices concerning this test and its application.

Results

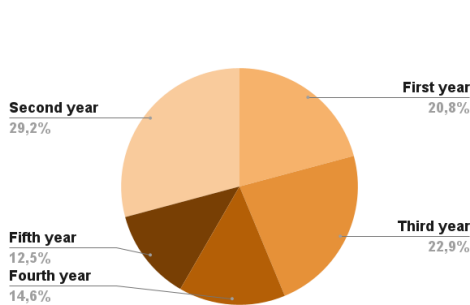


Figure 1. Rate of participation by year of residency

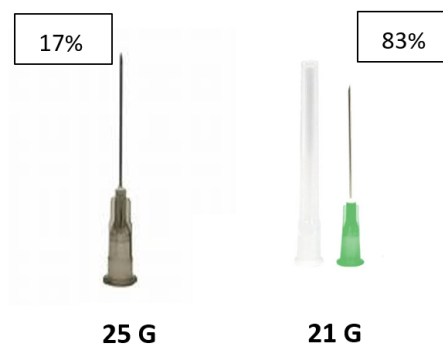


Figure 2. Caliber of blunt needles used

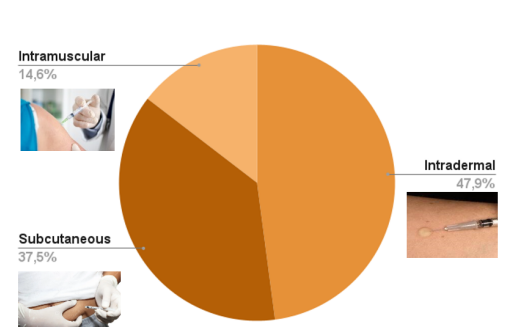


Figure 3. The pie chart illustrates the various injection sites of the test.

- 48 residents participated in the questionnaire.
- 50% of the residents have performed the Pathergy test, while 75% have observed it being performed.
- In 68% of cases, all respondents identified the doctor as the person responsible for performing the procedure and assessing the result after 48 hours.
- The test is mostly performed intradermally, to a depth of 3 to 5 mm in the forearm, using a single 21 G disposable blunt needle. In most cases, physiological saline is used (Figures 2, 3).

- 60% recommend that a 1-5 mm pustule is indicative of test positivity (Figure 4).
- In 64% of cases, the test is only performed if there is diagnostic doubt due to insufficient criteria to rule out Behçet's disease.
- 66.7% agree with the clinical correlation between test positivity and Behçet's disease (Figure 5).
- 48% find the test non-specific for Behçet's disease (BD) (Figure 6).

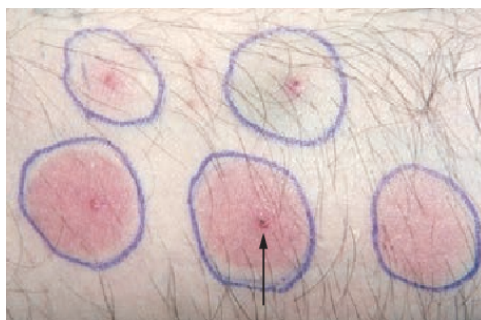


Figure 4. Clinical appearances of positive skin pathergy test at the region of ultraviolet B-induced erythema at 48 h on left forearm (arrow).

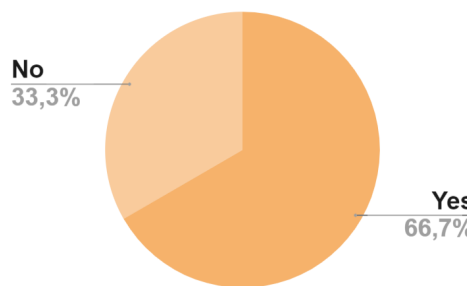


Figure 5. clinical correlation with test positivity

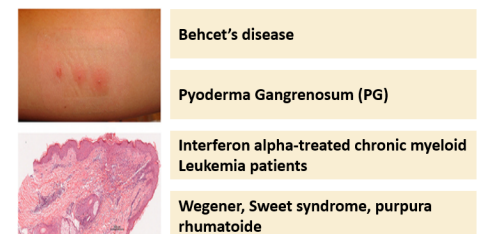


Figure 6. Conditions Associated with Positive Pathergy Test

Conclusion

Although the pathergy test can show positivity in various pathologies, (BD) is the only condition for which a positive pathergy test is included in the diagnostic criteria. Our study highlights the diverse methods of conducting the pathergy test, which can affect the interpretation of results. Factors influencing pathergy positivity include needle sharpness and size, the number of pricks, disease-related factors, disinfection methods, medications used, and ethnic/geographic background.

Despite its significant role in the diagnosis and management of Behçet's disease, the pathergy test is still underutilized in this context. Currently, there is no standardized method for performing the pathergy test. However, understanding the pathergy reaction in neutrophilic dermatoses, such as (PG), and other diseases is crucial, as it can impact diagnosis and evaluation. Systematic study and application of the pathergy test in these conditions could provide valuable insights into their pathophysiology and potentially guide their management.

Many aspects of the pathergy reaction and its clinical correlates remain unclear. Further research and repeated performance of the pathergy test in Behçet's disease and related conditions are warranted to enhance understanding and application.