Prurigo Nodularis (PN): Diagnosis, Unmet Need, and Treatment

Diagnostic Workup in PN

Several conditions can be associated with PN[1]:

Systemic:
renal failure, chronic liver disease, HIV, thyroid disease

Dermatologic:
atopic dermatitis, bullous pemphigoid

Psychiatric:
psychogenic pruritus, anxiety, depression

- Multiple evaluations may be needed to confirm a diagnosis of PN, including a full dermatologic and physical exam, extensive clinical and family history, skin biopsy, imaging, and laboratory studies. The presence of chronic itch (>6 weeks) and nodular pruriginous lesions are the main clinical components of diagnosis. In addition to clinical diagnosis, these 2 steps are completed in PN diagnostic workup[1]:
    1. **Biopsy:** Skin biopsy may be needed to distinguish PN from other dermatologic diseases[1]
    2. **Laboratory Evaluation:** A thorough laboratory evaluation, including a complete blood count (CBC); complete metabolic panel (CMP); thyroid, liver, and kidney function tests; HIV serology and hepatitis B and C serologies, is needed—especially for patients without a history of underlying dermatoses—to determine the presence of an underlying systemic disease associated with PN[1]
- Tools are available to assess and follow up on itch intensity and the impact on quality of life in patients, given the chronic and severe nature of itch in PN and its impact on patients' lives

Common tools used to evaluate itch intensity in patients with PN[1]

- The Visual Analog Scale (VAS)
- Itch Numerical Rating Scale (Itch NRS)
- Worst Itch Numeric Rating Scale (WI-NRS)
- Verbal Rating Scale (VRS)

Common tools used to evaluate QoL in patients with PN[1]

- The Itchy QoL
- 36-item Short Form (SF-36)
- Dermatological Life Quality Index (DLQI)

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Current Topical and Systemic Treatments

- Currently there are no FDA- or EMA-approved treatments for PN. A multimodal approach is followed to determine and treat the underlying etiology of the disease, control itch, and treat the lesions. Physicians and patients must rely on available medications that are used empirically. Medications currently in use to treat PN include[2-7]:
    1. **Topical or intralesional steroids**
    2. **Phototherapy**
    3. **Systemic medications (eg, gabapentinoids, antidepressants, biologics)**
    4. **Immunosuppressants (eg, methotrexate, cyclosporin)**
- In severe cases of PN, immunomodulators such as thalidomide are sometimes prescribed. In a few cases of PN, topical capsaicin is prescribed to help reduce pain, pruritus, and the production of neuropeptides[5-7]

The Unmet Need in PN and the Burden of the Disease

- **Treatment failure is common** across the classes of medications currently in use for PN management. Nearly all patients with chronic PN experience treatment failure with topical glucocorticoids and antihistamines[3,8]
- Some patients with **PN do not respond, or respond poorly, to systemic therapies** such as methotrexate, phototherapy, gabapentin, and pregabalin[2,5,6,8,9]
- Available treatments for PN are focused mainly on managing PN symptoms vs addressing the underlying pathophysiology, and most **patients with PN are dissatisfied with current management options**[3,9,10]
- **Healthcare utilization is high** among patients with PN owing to management of the disease and associated comorbidities. Patients with PN can endure economic losses due to the cost of care, management of comorbidities, and time lost from work[1,11–13]
- Lack of effective therapies has resulted in mistrust in the healthcare system and **disengagement from it by some patients**[3,9,14]
- **A safe, targeted, and effective approach to PN care is needed**—one that will rapidly improve itch, heal nodules, and promote long-term QoL improvement[1,9,15]

References:

1. Kwon CD, Khanna R, Williams KA, Kwatra MM, Kwatra SG. Diagnostic workup and evaluation of patients with prurigo nodularis. *Medicines (Basel)*. 2019;6(4):97. doi:10.3390/medicines6040097 **2.** Ständer S, Pereira MP, Berger T, et al. IFSI-guideline on chronic prurigo including prurigo nodularis. *Itch*. 2020;5(4):e42. doi:10.1097/itx.0000000000000042 **3.** Kowalski EH, Kneiber D, Valdebran M, Patel U, Amber KT. Treatment-resistant prurigo nodularis: challenges and solutions. *Clin Cosmet Investig Dermatol*. 2019;12:163-172. doi:10.2147/CCID.S188070 **4.** Zeidler C, Tsianakas A, Pereira M, Ständer H, Yosipovitch G, Ständer S. Chronic prurigo of nodular type: a review. *Acta Derm Venereol*. 2018;98(2):173-179. doi:10.2340/00015555-2774 **5.** Qureshi AA, Abate LE, Yosipovitch G, Friedman AJ. A systematic review of evidence-based treatments for prurigo nodularis. *J Am Acad Dermatol*. 2019;80(3):756-764. doi:10.1016/j.jaad.2018.09.020 **6.** Satoh T, Yokozeki H, Murota H, et al. 2020 guidelines for the diagnosis and treatment of prurigo. *J Dermatol*. 2021;48(9):e414-e431. doi:10.1111/1346-8138.16067 **7.** Andersen TP, Fogh K. Thalidomide in 42 patients with prurigo nodularis Hyde. *Dermatology*. 2011;223(2):107-112. doi:10.1159/000331577 **8.** Kwatra SG. Breaking the itch–scratch cycle in prurigo nodularis. *N Engl J Med*. 2020;382(8):757-758. doi:10.1056/NEJMe1916733 **9.** Todberg T, Zachariae C, Skov L. Treatment and burden of disease in a cohort of patients with prurigo nodularis: a survey-based study. *Acta Derm Venereol*. 2020;100(8):adv00119. doi:10.2340/00015555-3471 **10.** Zeidler C, Yosipovitch G, Ständer S. Prurigo nodularis and its management. *Dermatol Clin*. 2018;36(3):189-197. doi:10.1016/j.det.2018.02.003 **11.** Whang KA, Kang S, Kwatra SG. Inpatient burden of prurigo nodularis in the United States. *Medicines*. 2019;6(3):88. doi:10.3390/medicines6030088 **12.** Whang KA, Le TK, Khanna R, et al. Health-related quality of life and economic burden of prurigo nodularis. *J Am Acad Dermatol*. 2021;S0190-9622(21)01028-8. doi:10.1016/j.jaad.2021.05.036 **13.** Aggarwal P, Choi J, Sutaria N, et al. Clinical characteristics and disease burden in prurigo nodularis. *Clin Exp Dermatol*. 2021;46(7):1277-1284. doi:10.1111/ced.14722 **14.** Lee MR, Shumack S. Prurigo nodularis: a review. *Australas J Dermatol*. 2005;46(4):211-220. doi:10.1111/j.1440-0960.2005.00187.x **15.** Pereira MP, Basta S, Moore J, Ständer S. Prurigo nodularis: a physician survey to evaluate current perceptions of its classification, clinical experience and unmet need. *J Eur Acad Dermatol Venereol*. 2018;32(12):2224-2229. doi:10.1111/jdv.15107

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