Dear Editor,

We read with great interest the paper recently published in Dermatology by Tzur Bitan et al. [1], demonstrating a significant link between hidradenitis suppurativa (HS) and bipolar disorders. Through a nation-wide population-based study on 4,191 HS patients and 20,941 age- and gender-matched controls, they found a significant proportion of bipolar disorders among HS patients: 0.7% vs. 0.1% in the controls. They also recall that the use of lithium is a known medication of bipolar disorders, has been reported in HS.

Bipolar disorder has been diagnosed in 3/9 before, in 1/9 simultaneously to, and in 3/9 after the onset of HS. Eight patients were treated by lithium. Two patients reported the development of HS lesions after the initiation of lithium, and 6 patients reported a worsening of the HS disease after the initiation of lithium, suggesting a temporal association between lithium therapy and the initiation or an exacerbation of HS.

It has been suggested that the pathophysiology of lithium-induced HS may be similar to that of lithium-induced acneiform and psoriatic lesions [7]. Lithium can inhibit adenyl cyclase and inositol monophosphatase, leading to a decreased intracellular level of cyclic adenosine monophosphate (cAMP) and inositol [8, 9]. It can also inhibit GSK3 (glycogen synthase kinase 3), a factor that activates the transcription factor HIF-1 (hypoxia-induced factor 1) [10]. This results in an increased neutrophilic mass (including neutrophilic infiltration of the epidermis), the release of lysosomal enzymes, and a keratinocyte proliferation [7–10], leading to the inflammatory cascade and the follicular plugging reported in HS.

This series is short and retrospective, making it difficult to draw reliable conclusions. It does, however, reinforce the possible role of lithium therapy in the association between bipolar disorders and HS. Further studies are needed to evaluate both the prevalence of HS among patients with bipolar disorders, and especially those with lithium therapy, and prospectively the temporal link between lithium initiation and HS course of occurrence. The diagnosis and the treatment of bipolar disorders must be considered as a crucial point in the therapeutic management of HS patients.

Key Message
Lithium administered for bipolar disorders is implicated in the induction or the exacerbation of hidradenitis suppurativa.

Disclosure Statement
P. Guillem received honoraria from AbbVie and Novartis as a consultant and provided lectures for AbbVie, Brothier, Cicaplus, Coloplast, Inresa, and Novartis. A.P. Villani received honoraria from Bailleul, GSK, Janssen, and Novartis as a consultant. F. Benhadou has nothing to disclose.

Author Contributions
A.P. Villani: critical revision of the work. F. Benhadou and P. Guillem: design of the work, acquisition, analysis, and interpretation.

References
10 Kast RE. How lithium treatment generates neutrophilia by enhancing phosphorylation of GSK-3, increasing HIF-1 levels and how this path is important during engraftment. Bone Marrow Transplant. 2008 Jan;41(1):23–6.