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DOI: 10.1159/000505912**Hidradenitis Suppurativa and Bipolar Disorders:
A Role for Lithium Therapy?**Farida Benhadou^{a,c} Axel Patrice Villani^{d,e} Philippe Guillem^{b,c,f,g}

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Keywords

Bipolar disorders · Lithium therapy · Hidradenitis suppurativa

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, a known medication of bipolar disorders, has been reported as a possible inducer of HS by teams from different parts of the world [2–4] and could therefore be one of the causes that explain the association between HS and bipolar disorders.

We conducted a retrospective study on a large cohort of 1,411 HS patients to study the prevalence of bipolar disorders and to investigate the potential link with the use of lithium. We found that 0.6% (9/1,411) were suffering from bipolar disorders, a prevalence very close to the 0.7% reported by Tzur Bitan et al. [1]. The sex distribution was 2 men and 7 women, with a median age of 34 years and a median body mass index of 30 kg/m². Seven patients were smokers. Three were classified as Hurley IB, 4 as IIB, and 2 as IIC, according to the refined Hurley classification [5]. HS was graded as mild in 1, moderate in 4, and severe in 4 patients, according to the IHS4 [6].

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, suggest-

ing 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 adenylyl 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

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Author Contributions

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

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