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Association Between Treatment Patterns and Comorbidities in Patients With Vitiligo: A Retrospective Real-World Data Analysis

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Introduction & Objectives: Standard of care treatment for vitiligo relies largely on off-label interventions such as corticosteroids (CS), calcineurin inhibitors (CI), and phototherapy. The impact of comorbidities, including psychological comorbidities, on treatment choice is currently unknown. This analysis describes real-world treatment patterns by comorbidities for patients with vitiligo in Israel.

Materials & Methods: A cross-sectional cohort analysis was conducted using the database of a large health service organization. Treatment patterns were assessed retrospectively for the 2021 prevalent population. Data were reported on the number and proportion of patients covered by treatment from the date of first vitiligo diagnosis until 31 December 2021. Treatment sequencing is presented as the proportion of patients treated with first-, second-, and third-line therapies, overall and by presence of comorbidities.

Results: Among the 2021 prevalent vitiligo population (N=11,412), immune-mediated comorbidities were present in 3389 (29.7%) patients and psychological comorbidities in 2129 (18.7%). Atopic dermatitis (12.5%), psoriasis (5.8%), Hashimoto's thyroiditis (2.9%), alopecia areata (2.2%) and prurigo nodularis (2.2%) were the most common immune-mediated comorbidities. Depression (10.8%; among adults: 1218/9082 [13.4%]), sleep disturbance/insomnia (5.9%), and anxiety (3.7%) were the most common psychological comorbidities.** Patients with ≥1 immune-mediated comorbidity were significantly more likely to receive any treatment (83.0% vs 71.3% [$P<0.001$; standard mean difference (SMD): 0.28]), including topical CS (62.6% vs 46.9% $P<0.001$; SMD: 0.32]), topical CI (40.4% vs 34.8% [$P<0.001$; SMD: 0.12]), systemic CS (33.7% vs 24.3% [$P<0.001$; SMD: 0.21]), systemic immunosuppressants (4.8% vs 0.4% [$P<0.001$; SMD: 0.28]), and phototherapy (9.5% vs 6.5% [$P<0.001$; SMD: 0.11]) than those without an immune-mediated comorbidity. Likewise, adult patients with depression were significantly more likely to receive any treatment (81.2% vs 76.3% [$P<0.001$; SMD 0.12]), including topical CS (60.2% vs 54.0% [$P<0.001$; SMD: 0.12]) and systemic CS (44.5% vs 28.4% [$P<0.001$; SMD: 0.34]) compared with patients without depression.** Significant differences in first- and second-line therapy overall by presence of ≥1 immune-mediated comorbidity (vs none) or depression (vs no depression [adult patients]) were observed ($P<0.05$; SMD >0.1). For first-and second-line therapy, differences in topical and systemic therapy patterns were minor; for third-line therapy, patients with ≥1 immune-mediated comorbidity (vs none) and adult patients with depression (vs no depression) were more commonly prescribed systemic immunosuppressants (19.0% vs 2.8% and 17.9% vs 11.7%) and less commonly prescribed phototherapy (9.0% vs 22.2% and 7.1% vs 16.1%).

Conclusion: These data show that patients with vitiligo and immune-mediated comorbidities or depression are more likely to receive treatment than patients without these comorbidities. Patients with these comorbidities may also progress more rapidly to systemic therapy as evidenced by greater use of systemic interventions at third line. These findings suggest that the increased impact of additional physical or psychosocial burden may potentially drive treatment decision making.