



Dermatologic Conditions in Patients with Down Syndrome

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Introduction

Down Syndrome (DS) is the most common chromosomal disorder with an extensive range of dermatologic manifestations¹. While DS is a highly researched congenital condition, literature surrounding common dermatoses among the DS population is limited². This review aims to synthesize studies published on these cutaneous manifestations and compare the prevalence of these conditions between the DS and non-DS populations.

Background

In a recent survey 56% of those with DS reported dermatologic manifestations³. Immunological disturbances such as hyperthyroidism and chronic hepatitis are also prevalent within the DS community. This increased susceptibility to autoimmune disorders likely stems from the trisomy of chromosome 21 and may manifest as various dermatoses^{2,4}.

Methods

PubMed keyword searches for dermatologic conditions in patients with Down syndrome were performed until August of 2020. The PubMed search terms included items such as “down syndrome”, “dermatology”, “trisomy 21”, “acne”, “hidradenitis suppurativa”, “alopecia areata”, “vitiligo” and “folliculitis”. No age, language, or time restrictions were included in the search. The articles were reviewed, and the references were evaluated for supplementary resources.

Results

Increased Prevalence Dermatoses

Dermatoses	Down Syndrome	General Population
Folliculitis ¹	6.8%	1.2%
Hidradenitis Suppurativa ¹	24.4%	0.5%
Vitiligo ⁴	1.9%	1%
Seborrheic Dermatitis ⁵	57%	2-5%
Alopecia Areata ⁶	6-10%	1.7%

Figure 1: Statistically significant increases in dermatological conditions in patients with Down Syndrome compared to the general population

Decreased Prevalence Dermatoses

Dermatoses	Down Syndrome	General Population
Acne ⁷	70.8%	95%
Melanoma ⁸	2 Observed	8.1 Expected
Non-melanoma ⁸	6 Observed	24.8 Expected

Figure 2: Statistically significant decreases in dermatological conditions in patients with Down Syndrome compared to the general population

Conclusion

Although the amount of literature pertaining to skin manifestations of DS is limited, the cutaneous disorders which seem to have the greatest prevalence within the DS community include hidradenitis suppurativa⁹, alopecia areata¹⁰, folliculitis¹¹, seborrheic dermatitis⁵, and vitiligo¹². Dermatoses which are less common among DS patients include acne^{13,14}, melanoma¹⁴, and non-melanoma skin cancer¹⁴. Physicians are likely to observe these common dermatologic conditions due to an increased lifespan and prevalence of patients with DS⁴. Correct diagnosis and treatment for these dermatoses will be paramount for comprehensive care and may have an impact on both the medical and psychological health of patients with DS¹⁵.

References

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