



ORIGINAL RESEARCH PAPER

Dermatology

PSORIASIS AND CANCER: A SYSTEMIC REVIEW

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ABSTRACT The relationship between psoriasis and increased cancer risk is debated. The aim of this study was to evaluate if there is an increase in the background risk of cancer in psoriasis patients compared with the general population. There was a large heterogeneity in studies assessing cancer risk in psoriasis preventing from including all studies in meta-analysis. This systematic literature review shows a small increased risk of some solid cancers in psoriasis, especially those linked to alcohol drinking and cigarette smoking. A higher risk of non-melanoma skin cancers, especially squamous cell carcinoma, is shown, mainly due to previous exposure to 8-methoxypsoralen-ultraviolet-A (PUVA), ciclosporin and possibly methotrexate.

INTRODUCTION

Cancer risk in psoriasis patients remains of particular concern due to the chronic inflammatory nature of the disease, the use of immunosuppressive and UV therapies, and the increased prevalence of well-established and comorbid cancer risk factors. such as smoking and obesity, all of which can increase the risk of carcinogenesis.

The classic presentation is pink, scaly, itchy plaques most commonly found on the elbows, knees, and scalp.

People with psoriasis have been found to have an increased risk of developing cancers including colon, kidney, larynx, liver, non-Hodgkin's lymphoma, esophagus, and pancreas.

They also found that people with severe psoriasis who developed cancer also had a higher overall risk of death.

Psoriasis is a chronic inflammatory disease of the skin and joints mediated by T cells.

About 1 in 4 psoriasis patients develop psoriatic arthritis in their lifetime.

A meta-analysis reported that patients with psoriasis were at increased risk for some solid cancers, lymphoma, and keratinocyte cancer.

Since then, multiple larger studies have been conducted investigating the association between psoriasis and cancer. We conducted a systematic review to describe the risk of cancer in psoriasis.

METHODOLOGY

Prior to the study, a protocol was developed describing the objectives, search strategy, and analysis plan of this systematic review.

As a tool, we used the CASPe platform to choose articles in English and Spanish, as well as the search base in PUBMED metasearch under the parameters "psoriasis" and "cancer", 80 medical scientific articles were evaluated.

REVISION

Because several common risk factors, such as smoking, alcohol use, obesity, diabetes, and stressful life events, have been shown to be shared in patients with psoriasis and cancer, it has been proposed that patients people with psoriasis tend to be at higher risk for various diseases, including cancer. However, some other studies are also proposed that psoriasis patients may have a lower risk of cancer.

Early hypotheses indicated that psoriasis was a protective factor for skin cancer incidence due to a reduced ability of psoriatic skin to metabolize precarcinogens caused by altered arylhydrocarbon hydroxylase activity (AHH) .

Pouplard et al. summarized nine studies and showed that patients with psoriasis had an increased risk of cancer of skin no melanoma, both for squamous cell carcinoma (RR 5.31, 95% CI 2.63 to 10.71) and basal cell carcinoma (RR 2.00, 95% CI 1.83 to 2.20).

Peleva et al. suggested that an increased risk of cancer of skin no melanoma, particularly squamous cell carcinoma, was reported in psoriasis patients, found that psoriasis was also significantly associated with the risk of NSCLC, but only for squamous cell carcinoma, not for cell carcinoma basal. These findings appeared to be primarily related to exposure to PUVA treatments, which had been reported to have the potential to induce p53 mutations and contribute to the development of cancer of skin no melanoma in psoriasis patients.

DISCUSSION

In this systematic review and meta-analysis, we found significant associations between psoriasis and overall cancer risk, cancer excluding keratinocyte cancer, lymphomas, lung cancer, and bladder cancer.

We did not find an increased risk of cancer in patients with psoriatic arthritis.

A 2013 meta-analysis showed an association between psoriasis and cancer, excluding keratinocyte cancer, keratinocyte cancer, and some solid cancers, including respiratory tract and urinary tract cancer.

Studies investigating the risk of keratinocyte cancer in patients receiving psoralen-UV-A (PUVA) therapy show a very high risk, particularly of squamous cell carcinomas.

One study investigated the risk of melanoma and keratinocyte cancer in psoriasis patients compared to the general population of Denmark, adjusting for confounding factors including PUVA, the study found a small but significantly higher risk of keratinocyte cancer, which indicates that factors other than PUVA treatment may be important.

Keratinocyte cancer patients often spend more time in the sun and have been treated with UV-B radiation and tar, which increase the risk of keratinocyte cancer.

Patients with psoriasis have an increased risk of developing Hodgkin and non-Hodgkin lymphoma, this elevation could be explained in part by an increased risk of cutaneous T-cell lymphoma (CTCL) in patients with psoriasis.

In a study of patients with coexisting diagnoses of CTCL and psoriasis, both diagnoses could be verified histologically in a high proportion of patients.

Chiesa Fuxench et al found an increased risk of lung cancer when they adjusted to smoking.

Brauchli et al found an increased risk of cancer excluding keratinocyte cancer when adjusting for body mass index, smoking, and benign tumors.

Lee et al found an overall increased risk of cancer when adjusting for various confounders, certain lifestyle factors, however, they cannot explain the associations alone.

CONCLUSION

Psoriasis patients appear to be at increased risk for cancer, particularly keratinocyte cancer, lymphomas, lung cancer, and bladder cancer. Physicians treating patients with psoriasis should be aware of this increased risk, especially for lymphomas, as immunogenic treatment can be associated with exacerbations. The current literature does not suggest an increased risk of cancer associated with biological agents; however, more research is needed. The evidence on the risk of cancer in psoriatic arthritis is limited and more studies are needed.

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