

Mycosis fungoides and associated malignancies in a Dutch nationwide retrospective cohort study

Introduction

The prognosis of patients with mycosis fungoides (MF) is variable and largely depends on the disease stage. Recent evidence shows a higher incidence of other primary malignancies (OPMs) in MF patients but have shown mixed results. This study investigates the incidence of OPMs in MF patients in the Netherlands and compared with the Dutch population.

Methods

A retrospective, nationwide, population-based cohort study was performed with data from the Dutch Cutaneous Lymphoma Registry including patients with a diagnosis of MF between 2000-2020. All histopathology reports were requested from the Nationwide Network and Registry of Histo- and Cytopathology in the Netherlands and screened for diagnoses of OPMs. Life-long incidence rates were used to compare the incidence of malignancies in MF patients and the general population based on data from the Netherlands Cancer Registry and Statistics Netherlands.

Conclusions

Our study shows no association between MF and other solid organ tumors, however patients with MF are significantly at risk for developing other hematological and cutaneous malignancies compared to the general population. Clinicians should be aware of this increased risk when conducting total body skin inspections during routine check-ups.

Results

- 1024 patients were included
- Average age of 60 years (SD 17)
- Mean follow-up of 10 years (SD 6)
- 294 cases of other primary malignancies were found
 - 28% of the MF patients developed at least one OPM
- Only cutaneous OR 2.54 (CI 2.0-3.2) and hematological malignancies OR 2.62 (CI 2.00-3.42) had a statistically significant higher incidence than the Dutch population
- Cutaneous malignancies more frequently found than in the reference population:
 - Melanomas OR 2.76 (CI 2.11-3.59)
 - Cutaneous squamous cell carcinomas OR 2.34 (CI 1.58-3.45)
- Hematological OPMs more frequently found than in the reference population:
 - Lymphomatoid papulosis OR 76.22 (CI 50.35-115.32)
 - Hodgkin lymphoma, OR 6.28 (CI 2.02-19.55)

Categories	MF (n=796)	FMF (n=228)	Total (n=1024)
Age at diagnosis (years)	61 (SD 17)	58 (SD 17)	60 (SD 17)
Duration of follow-up (years)	10 (SD 6)	10 (SD 6)	10 (SD 6)
Male (%)	506 (64%)	164 (72%)	670 (65%)
Female (%)	290 (36%)	64 (28%)	354 (35%)

Table 1. Characteristics of the study population MF, Mycosis Fungoides; FMF Folliculotropic Mycosis Fungoides; SD, standard deviation

OPM	Before MF Diagnosis (n)	After MF Diagnosis (n)	Total n (%)	OR [CI]	P-value
Skin	34	54	88 (23,3%)	2.54 [2.02-3.19]	<0.001
cSCC	18	43	61 (16.2%)	2.76 [2.11-3.59]	<0.001
Melanoma	15	11	26 (6.9%)	2.34 [1.58-3.45]	<0.001
Hematological	43	18	61 (16.2%)	2.62 [2.00-3.42]	<0.001
Digestive tract	22	27	49 (13.0%)	0.76 [0.56-1.02]	0.07
Male genital organs	28	20	48 (12.7%)	1.22 [0.90-1.64]	0.21
Breast	26	14	40 (10.6%)	1.35 [0.96-1.89]	0.09
Urinary tract	10	18	28 (7.4%)	0.97 [0.66-1.42]	0.87
Respiratory tract	10	14	24 (6.4%)	0.54 [0.35-0.84]	0.01
Head and neck	4	8	12 (3.2%)	0.60 [0.65-2.13]	0.60
Female genital organs	8	3	11 (2.9%)	1.10 [0.58-2.06]	0.77
Primary location unknown	0	7	7 (1.9%)	1.11 [0.53-2.35]	0.78
Bone, articular cartilage and soft tissues	4	1	5 (1.3%)	2.18 [0.91-5.25]	0.08
Endocrine	2	0	2 (0.5%)	1.64 [0.41-6.56]	0.49
Eye	1	0	1 (0.3%)	1.68 [0.24-11.95]	0.60
CNS	1	0	1 (0.3%)	0.29 [0.04-2.07]	0.22
Total	193	184	377	-	-

Table 2. OPM distribution in MF patients.

OPM, Other primary malignancies; cSCC, cutaneous squamous cell carcinoma; CNS, Central nervous system; MF, Mycosis Fungoides; OR, odds ratio; CI, 95% confidence interval. In bold: mycosis fungoides-associated primary malignancies

References

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