Malignant Melanoma

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Definition

Malignant tumor, originating in the pigmented, melanocytic cells of the skin.

Coding (ICD-10): malignant melanoma (C43.Lxx), lymph node metastases of melanoma (C77.x), visceral metastases of melanoma (C78.810), cutaneous metastases of melanoma (C79.2xx), melanoma in situ (D03.L00).

Epidemiology

Earlier age peak than in skin carcinomas, (50–55 years), not infrequent even in young adults. Prognosis depends on size and depth of infiltration. In early stage (tumor diameter (TD) < 0.75 mm) low risk of metastasizing and high 10-year-survival rate (>95%). In late stages (TD > 4 mm) high risk of metastasizing and low 10-year-survival rate (<30%). 10-year-survival rate for all stages about 75–85%. Thus, early detection is essential. In many countries, federal screening programs for the prevention and early detection of melanoma have been shown to be effective in reducing mortality.

Clinics

Mostly pigmented lesions located at any site of the integument including areas with only low frequency of sun irradiation. In rarer cases, the gastro-intestinal system, the pulmonary mucosae and the retina can be affected. Most striking characteristics are the color, contour, and size of the lesions. Differential diagnosis to dysplastic naevi and precursors of melanoma may be difficult.

Several clinical subtypes:

Superficial spreading melanoma (most frequent subtype),
lentigo maligna melanoma (best prognosis, evolving from lentigo maligna),
nodular melanoma (worse prognosis),
acral lentiginous melanoma (worse prognosis).

Dermatological Diagnostics

Required: Clinical and histological diagnosis. Staging (imaging, laboratory) depending on stage (in most countries recommendations of the National Dermatological Societies). Regular follow-up examinations over 10 years at increasing, stage-dependent intervals of 2 months to 1 year are recommended.

Optional: Additional diagnostics appropriate to clinical necessity.

Psychosomatic Diagnostics

Levels of evidence (L1–L4)

Evidence is based on at least:

- L1 = one randomized controlled clinical or experimental study or one systematic review,
- L2 = one non-randomized, but controlled study,
- L3 = one uncontrolled but quasi-experimental study of high methodological value,
- L4 = expert opinion.

Emotional Factors in Onset and Course (L2)

Tumor induction due exclusively to emotional factors is no longer seriously discussed. A causal co-involvement of emotional influences in the formation of tumors has been examined in numerous studies [e.g., Bahnson, 1986], but could not be decisively methodically proven [Schwarz and Greyer, 1984]. However, in animal experimental models, it could be demonstrated that greater stress stimuli led to a significantly higher later risk of tumors, as long as other tumor inductors were active [LaBarba, 1970; Sklar and Anisman, 1981]. In the human system, there are numerous proofs for an emotionally caused deterioration of anti-cancerogenic mechanisms, e.g., DNA repair [Kiecolt-Glaser et al., 1985; overview in Schulz, 1991]. Evidence was also found in many studies with respect to exceptional life events [Sklar and Anisman, 1981; Bahnson, 1986], but the studies were all retrospective. Large prospective studies are methodically difficult and have yet to be performed.

Psychoneuroimmunology has a very important role in the attempt to elucidate the influence of emotional factors on tumor disease. The underlying hypothesis is that the course of the tumor disease (in addition to the biological properties of the tumor) is decisively dependent on the organism's defense capacity. The probability of recurrence or metastasizing appears to be elevated in phases of compromised immunological function. These psycho-immunological findings are supported by clinical observations that emotional factors influence the clinical and immunological course of malignant diseases [Greer et al., 1979], especially social support [Baron, 1990].

Emotional Problems in Coping (L1)

Considerable psychosocial stress may result from a tumor disease in general [Greer et al., 1979, 1989; Pettingale et al., 1988] and especially from malignant melanoma [Söllner et al., 1996, 1998, 1999; Tilkorn et al., 1990; Augustin et al., 1997; Cassileth et al., 1982; Perkins et al., 1993]. Affective disorders occur in a considerable percentage of patients, but certainly not in all. Psychiatric morbidity must be assumed in one-fourth of patients, about one-third of these show some kind of adaptation disorder [Derogatis et al., 1983]. Active coping with disease has repeatedly been found to be an important prognostic factor for the course of the tumor disease [Rogentine et al., 1979; Temoshok et al., 1985; Pettingale, 1984; Heim, 1991; Derogatis et al., 1979; Felton and Revenson, 1987; Baider et al., 1989].

Diagnostic Measures

Obligatory: Medical discussion: psychosocial situation, exploration of illness-related stress, especially fear of tumor and fear of OP/disfigurement. Watch for co-morbidity, especially in older patients.

Optional: Psychometric inventories, e.g.,

STAI, SCL-90, or HADS with respect to psychological symptoms,

Hornheider Questionnaire with respect to disease-specific stress [Rumpold et al., 2001],

FKV with respect to coping,

SF-36, Euroqol, DLQI, FLQA-t with respect to quality of life.

Therapy

Dermatological Therapy

External: Surgery with safety margin. The value of prophylactic lymphadenectomy is controversial. Since melanomas are hardly susceptible to radiation, radiation therapy is only applied as second line treatment (e.g., in inoperable brain metastases).

Internal: Adjuvant chemo-immunotherapy is performed in many variants. Clear superiority over purely surgical therapy with respect to survival and recurrence rate has only been demonstrated in a few studies thus far and only in patients

with lymph node metastases. More recent procedures like tumor vaccination and adoptive immune transfers are still in the probationary phase.

Psychosomatic Therapy

The need for psychosocial support has been estimated in several studies [Söllner et al., 1996; Strittmatter et al., 1998; Augustin et al., 1997]. About 20–30% of malignant melanoma patients are in strong need of support. Spiegel et al. [1989] showed the effectiveness of psychotherapeutic measures also with respect to survival and recurrence-free time in patients with breast cancer.

For melanoma patients, a study by Fawzy et al. [1990a, b] found a significant benefit of group intervention consisting of 3 components: 1. group psychotherapy, 2. stress management (relaxation techniques) and 3. health training. This had a significant favorable effect on the affect status and coping strategies. The intervention group had a slightly higher energy-activity score at the end of treatment, which showed a significant difference to a non-treated control group after 6 months. Another result at the affective level was seen in significantly lower depression values, less susceptibility to fatigue and less pronounced affective disturbance. At the coping strategy level, active behavioral coping was evident in the intervention group.

A catamnesis study performed 6 years later [Fawzy et al., 1993] showed that significantly more patients in the control group had died than in the intervention group. The recurrence quota in the control group was also significantly higher. Breslow-depth and group intervention were found to be two interdependent prognostic factors. Thus at equal Breslow-depth, the prognosis for patients in the intervention group was significantly better than in the control group. These favorable effects were, however, only found in the group with medium-risk melanoma (TD 1.5–4 mm, no distant metastases). It was also found that higher emotional distress and coping scores at the start of intervention were correlated with longer survival time and lower recurrence rate. No replication of the Fawzy results has yet been published.

Psychosomatic Primary Care (L4)

Establishment of a therapeutic relationship, clarification of the psychosocial effects of the disease, conflict-oriented discussions.

Relaxation (L3)

Subareas of the Fawzy Study [1990a, b, 1993]. Otherwise no controlled studies. Progressive muscle relaxation or comparable, quickly-learned techniques, relevant for reduction of perioperative tension and stress, are also proven effective in reducing side effects of chemo-immunotherapies (analogy to other psychooncological studies).

Depth-Psychological and Analytical Procedures (L4)

No controlled studies. Rare indication in clinical experience.

Behavioral therapy (L4)

No controlled studies. Rare indication in clinical experience.

Hypnosis (L4)

No controlled studies. Efficacy in reduction of perioperative side-effects can be assumed analogous to studies in other diseases (see atopic dermatitis, general oncology).

Psychopharmacology (L4)

Used when intensified pain therapy must be applied using, for example neuroleptics. Can also be of benefit as adjuvant treatment in case of reactive depression.

Training Programs and Combination Therapies (L4)

Subareas of the Fawzy Study [1990a, b, 1993]. Otherwise no controlled studies. Procedure could, however, be applied for tertiary prevention. Instructions for self-examination of skin and lymph nodes important.

Self-Help (L4)

Of potential benefit, but in many countries no specific self-help groups.

Patient information

Good patient information can be found on the following pages:

<http://www.mpip.org/> Melanoma patients information page (non-profit organization).

<http://www.melanoma.org/> Melanoma research organization (non-profit organization).

<http://www.skincheck.com/> Melanoma education foundation (non-profit organization).

<http://www.nationalmelanoma.org/> National Melanoma Foundation

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