

DERMATOLOGICAL IMPAIRMENT RATING SECTION

OBJECTIVES DERMATOLOGICAL IMPAIRMENT RATING SECTION

1. Define the three elements used to determine the classifications for skin disorders.
2. Know how to utilize the dermatological ratings, neurological ratings, psychological ratings, and Chapter 9, section 2 (page 179), to determine an impairment rating for scars and other skin disorders.
3. Correctly rate a case scenario involving contact dermatosis.

DERMATOLOGICAL IMPAIRMENT RATING SECTION

INTRODUCTION

In order to rate cutaneous impairment, the functions of intact skin must be taken into account.

- A primary purpose is the provision of a protective barrier against environmental insults such as chemical irritants, allergic sensitizers, ultraviolet light and invasion from micro-organisms such as bacteria or fungi.
- The skin has a key role in temperature regulation due to proper operation of small blood vessels and sweat glands. In addition it is involved in sensory perception.
- Fluid and electrolyte balance is related to the intact stratum corneum's barrier against fluid loss.
- Cutaneous immunologic defense of the skin prevents and controls bacterial, fungal and viral infections.
- Lastly, the skin has a unique ability to regenerate its epidermis and appendages.

PERMANENT IMPAIRMENT OF THE SKIN

- Cutaneous permanent impairment of the skin is defined as a skin condition that persists following maximal medical treatment, rehabilitation, and after a length of time sufficient to permit regeneration or other physiologic adjustments. This definition includes any functional or anatomic abnormality or loss including an acquired immunologic capacity to react to antigens (allergic contact dermatitis). Physical findings should always be subject to review since the degree of permanent impairment of the skin may not be static.
- Job-related permanent impairment of the skin most commonly results from contact dermatitis.
- According to the Guides, all dermatological impairments are calculated and applied to whole person impairments.

EVALUATING CUTANEOUS IMPAIRMENT

Medical evaluation involves:

- Detailed medical history
- Complete physical examination
- Diagnostic tests - helpful ones include:
 - ▶ Patch testing to diagnose allergic contact dermatitis
 - Careful interpretation is necessary
 - These tests can yield false positives and false negatives
 - Results depend on proper technique, physician's skill in interpretation, proper concentration and vehicle
 - ▶ Prick or scratch testing
 - ▶ Bacterial or fungal cultures
 - ▶ Potassium hydroxide scrapings
 - ▶ Skin biopsy

With permanent impairment of the skin, the amount of functional loss is of tantamount importance. Other factors to consider include:

- Extent of surface involved
- Altered cosmetic appearance:
 - ▶ Pus
 - ▶ Smell
 - ▶ Scale
 - ▶ Disfigurement
- Site involvement:
 - ▶ Hands and feet are more important
- Risk of treatment.

Skin impairment can be associated with other body system involvement. Each system should be evaluated independently for its degree of impairment and then combined using the combined values chart to assess the total impairment of the whole person.

PRURITUS

Itching with its associate desire to scratch or rub is a commonly associated symptom of a wide variety of skin diseases. The symptom can be intolerable. Like pain, the sensation involves variable afferent stimuli interacting with the emotional state of the individual. In evaluating impairment, one should assess:

- How pruritus interferes with the performance of daily living.
- Can the severity of the pruritus be supported by objective findings:
 - Excoriations
 - Lichenification (thickened skin)
 - Hyperpigmentation
 - Hypopigmentation
- Whether psychological factors play a role. In such a case, the psychological ratings should be employed.

DISFIGUREMENT

Disfigurement is defined as an altered appearance induced through changes in skin color, shape and/or structure. It can be a result of injury, disease, or an ongoing disorder.

There is usually no loss of body function and little to no effect on activities of daily living.

The physician should state probable duration and permanency of the altered state.

If the appearance can be improved through medical or surgical therapy, or concealment with makeup or wigs, this should be addressed in the report.

Psychological ratings may be needed to assess the extent of the patient's change in self image, interactions with others or withdrawal from society.

Scars - result from healing of burned, traumatized or diseased tissue.

- Assessment should include:
 - ▶ Size, shape, color and texture
 - ▶ Anatomic location
 - ▶ Evidence of ulceration and need for subsequent therapy
 - ▶ Depressed (atrophic) or elevated (hypertrophic) skin
 - ▶ Sensory or range of motion defect

- ▶ Involvement of sweat gland function
- ▶ Related psychological or behavioral changes
- Impairment rating must include consideration of the following elements:
 - ▶ Sensory alterations of a scar should be rated according to the Neurological Impairment Guidelines (Chapter 4).
 - ▶ Contracture leading to decreased range of motion should be assessed according to the Musculoskeletal Guidelines (Chapter 3), and if chest wall excursion is limited, respiratory impairment should be rated.
 - ▶ Loss of sweat gland function, hair and nail growth, along with pigment production should be assessed. This should be judged according to the impact on a patient's performance of their activities of daily living using the Dermatology Guidelines.
 - ▶ Scars involving the face should be rated separately, according to the ENT ratings for facial disfigurement (Chapter 9, Section 2).
 - ▶ Behavioral changes may be assigned an appropriate impairment rating according to psychological criteria.
 - ▶ If no neurologic, psychiatric or facial involvement exists, and there is no loss of range of motion, then the most likely rating would be a Class I under Table 1, Chapter 13 of the Guides.

IMPAIRMENT CLASSIFICATION FOR SKIN DISEASE

Three elements are used to define the five classes of skin impairment.

1. The presence of signs and symptoms of a skin disorder
2. Intermittent or continuous treatment
3. Assessment of the limitations in performance of the activities of daily living

Class I Impairment of the Whole Person, 0 - 5%.

- Signs and symptoms are present.
- With treatment, there are none or minimal limitations in performance of activities of daily living, although exposure to certain physical or chemical agents may increase limitations temporarily.
- For example:
 - Forty year old mechanic complains of a one year history of an intermittent foot rash. The eruption began on the dorsum of the foot. Recently, the eruption has spread onto his ankles. The rash improves with topical steroid therapy and on weekends when he is not working. The patient purchased new ankle high leather work boots 12 months ago. The shoes

he wears at home are all made of synthetic materials. His feet sweat profusely on the job. Patch testing revealed a 2+ reaction to potassium dichromate which is used to tan leather. The eruption was completely resolved with topical steroid treatment and switching to sturdy polyvinyl chloride work boots.

- ▶ Diagnosis:
Allergic contact dermatitis due to chromates used in leather tanning
- ▶ Impairment:
0% impairment of the whole person

A thirty year old woman worked as a waitress for the past eight years. Sixteen months ago she incurred a third degree burn on her arm due to a co-worker spilling scalding hot soup on her. Now she has a noticeable 10 X 6 cm atrophic scar. There is no sensory deficit or loss of range of motion. No grafting was necessary and she is able to perform activities of daily living. The patient has always worked in upscale restaurants where the waitresses wear short sleeved or sleeveless outfits. The management takes pride in their workers' appearance and had received complaints about the waitress' deformity. The patient had tried to conceal the disfigurement with various cover-up makeups with little success. Outside of work she experienced considerable embarrassment about her scar and avoids wearing short sleeved outfits on a social basis. However, she can PERFORM her job function in a competent fashion.

- ▶ Diagnosis:
Cosmetic disfigurement secondary to a forearm scar
- ▶ Impairment:
1-5% impairment of the whole person
- ▶ Comment:
The patient now has a permanent cutaneous abnormality that does not result in a functional disability, but may result in minimal limitations on activities of daily living. If the patient also has behavioral changes, then the appropriate psychological rating should be instituted.

If the scar had involved the face, then the appropriated facial disfigurement would be rated according to ENT guidelines (Chapter 9, Section 2).

Class II - Impairment of the Whole Person, 10 - 20%.

- Signs and symptoms of a skin disorder are present.
- Intermittent treatment is required.
- Limitation in performance of some activities of daily living.
- For example:

A 27 year old beautician has a chronic hand rash for the last seven years which she related to her workplace. As a child, the patient had atopic dermatitis involving mainly the popliteal and antecubital spaces which resolved as a teenager. Her current problem began when she started beautician school eight years ago. Since then, she has had increasingly difficult hand eruptions. Recently, the rash has spread to her forearms. At times, the rash has been so bad that she has had to miss work. Her job entails washing and cutting hair. She wears gloves while shampooing, but they are too cumbersome for hair cutting. While the eruption is worse on the job, she notes that everyday activities such as cooking and cleaning flares her eruption. Currently, despite precautions, a low grade dermatitis persists. Her fingerwebs and dorsal hand are primarily involved. Patch testing was negative and topical steroids improve her dermatitis. Ultimately, the patient chose to leave her job and engage in personnel work which is a "drier" environment. However, the patient still has chronic hand dermatitis.

- ▶ **Diagnosis:**
 - Chronic irritant contact dermatitis of the hands due to chronic exposure to chemicals and irritants at her beautician job
 - History of childhood atopic dermatitis
- ▶ **Impairment:**
 - 15% impairment of the whole person
- ▶ **Comment:**
 - Patients with history of childhood atopic dermatitis are predisposed to irritant contact dermatitis on the job. It is in the best interest of this patient to avoid "wet-work" including frequent contact with water and irritating chemicals. While her worst flares occurred at work, this patient will have intermittent flares necessitating treatment due to non-specific irritant exposures at home.

Class III - Impairment of the Whole Person, 25 - 50%.

- Signs and symptoms of a skin disorder are present.
- Continuous treatment is required.
- Limitation in performance of many activities of daily living.
- For example:

A 44 year old piston molder without a history of skin problems had been with the company for 12 years. Due to budget cuts, he was switched to a machinist job where he was exposed to cutting oils over the past 18 months. No protective clothing was worn and the cutting oil would splash all over him including his arms and legs. Shortly after starting the new position, he developed a pruritic hand dermatitis which later spread to involve his arms, legs, buttock and back. Initially, the eruption cleared with topical steroids, but over the last 6 months, the dermatitis has failed to completely clear despite aggressive therapy and avoidance of exacerbating agents. Patch testing was negative. As a result, he was returned to his original molding job. Wearing protective clothing with exposure to high temperatures induced sweating, which worsened his dermatitis while on the molding job. Now, despite being off work and avoiding exacerbating factors, the eruption has not subsided. The pruritus and continuous itching has resulted in lichenification (thickening), excoriations, scale and erythema. Forty percent of his body is involved (hands, thighs, legs, arms, buttock and lower back). Since his eruption began, he has been very anxious and depressed about losing his life's work. He cannot hold down an alternate job because all appear to flare his rash. He is more socially withdrawn and feels that the chronic eruption inhibits his contact with women. In addition, he is unable to sleep at night and believes he is itching "all over".

- ▶ **Diagnosis:**
 - Chronic irritant soluble oil contact dermatitis
 - Chronic neurodermatitis
- ▶ **Impairment:**
 - 30% impairment of the whole person
 - This should be combined with an appropriate psychological rating.
- ▶ **Comment:**
 - Soluble oil contact dermatitis tends to be chronic and lasts far longer than the exposure to the oil. Non-specific irritants such as warm environments, stress, cleansers and sweating can exacerbate the dermatitis.

His inability to sleep at night, depression and incessant scratching have resulted in a superimposed neurodermatitis (itch-scratch syndrome).

Class IV - Impairment of the Whole Person, 55 - 80%.

Signs and symptoms of a skin disorder are present.

- Continuous treatment is required.
- May include periodic confinement at home or other domicile.
- Limitation in the performance of many activities of daily living.
- For example:

A 50 year old white male cement worker for the last 30 years had a mild history of pedal edema and stasis dermatitis. His stasis dermatitis was well controlled with a 1% hydrocortisone ointment. One year ago, wet cement got trapped inside his right boot at work and he was unable to change the boot right away. He subsequently developed severe chrome-related ulcers. One healed with grafting. The other one failed multiple grafting attempts and now is approximately 3x4 cm and located near the medial malleolus. He now has increased pedal edema despite elastic stockings, diuretics and leg elevation. He is unable to stand more than 3-4 hours at a time.

▶ Diagnosis:

Persistent chronic ulcer secondary to cement burn

▶ Impairment:

55% impairment of the whole person

▶ Comment:

Patient suffered a cement burn on his right leg that had a previous history of poor circulation and edema.

Frequent medical care will be required indefinitely to heal this ulcer. Due to its location and his previous history, future breakdown after healing is probable.

Patient does have significant impairment of his activities of daily living due to his incapacity to stand for long periods of time.

Class V - Impairment of the Whole Person, 85 - 95%.

- Signs and symptoms of a skin disorder are present.
- Continuous treatment is required.

- Necessitates confinement at home or other domicile.
- Severe limitation of the activities of daily living.
- For example: (from AMA Guidelines)

A 25 year old man suffered burns on his body three years ago from a gasoline explosion. His daily treatment includes a 30 minute soak followed by total body Vaseline application. He still experiences a significant amount of itching and is unable to perspire except on his face. He cannot be outside in the heat or sun for prolonged periods of time due to his impaired ability to sweat and concomitant dizziness. He has difficulty writing, walking and doing nonspecialized hand activities due to scar formation. He has 85% skin involvement with some dermatologic disease including residual burn scars, graft sites, donor sites, depigmentation, partial destruction of his left ear and thickened fingernails. The cheeks were mildly involved.

▶ Diagnosis:

Residual skin damage with extensive scarring due to a gasoline explosion

▶ Impairment:

90% impairment of the whole person

Range of motion deficit should be rated according to the musculoskeletal section.

Facial involvement should be rated according to ENT guidelines.

Related Articles:

Hogan, DJ, et al. The prognosis of contact dermatitis. J Am Acad Dermatol 1990; 23:300-7.

Mathias, T. Contact dermatitis and worker's compensation: criteria for establishing occupational causation and aggravation. J Am Acad Dermatol 1989; 20:842-8.

Stewart, L. Occupational contact dermatitis. Allergy & Immunology Clinics of North America. November, 1992. In Press.