Dermacase

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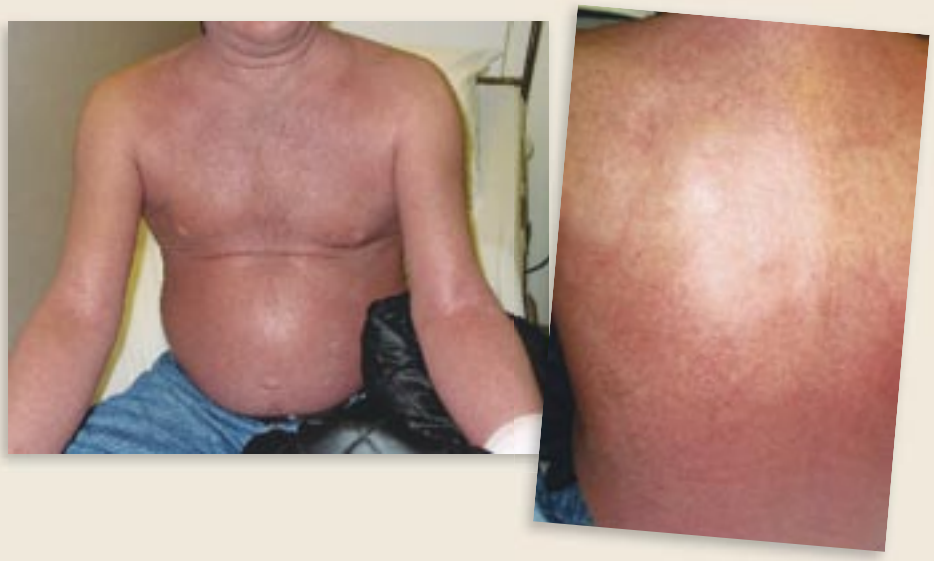

CAN YOU IDENTIFY THIS CONDITION?

A 55-year-old man presented with generalized erythema, edema, a little scaling, and moderate pruritus. He said he had felt fatigued for the past year. He first noticed slight erythema approximately 6 months ago and indicated that it had became more diffuse and progressed to edema and pruritus during the last month. He has been taking captopril and acetylsalicylic acid for the last 2 years. He has no personal or family history of skin disease. He is taking no other medications, but is allergic to penicillin, which gives him a rash.

The most likely diagnosis is:

1. Erythrodermic psoriasis
2. Generalized seborrheic dermatitis
3. Drug reaction
4. Erythroderma secondary to cutaneous T-cell lymphoma
5. Generalized dermatophytosis

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4. Erythroderma secondary to cutaneous T-cell lymphoma, however, all of the answers are reasonable diagnoses

Erythroderma (exfoliative dermatitis) is an erythematous dermatitis characterized by generalized or nearly generalized skin erythema, edema, scaling, pruritus, and often loss of hair and nail dystrophy. The pathophysiology of erythroderma is not completely understood. The rate of epidermal turnover increases, probably because of the interaction among various cytokines and cellular adhesion molecules in the skin.[1] There is no racial predilection, but men are two to four times more likely to get it than women. Erythroderma generally occurs in older people; average age of onset is 60 years.[2]

Erythroderma is uncommon. Annual incidence is about one to two cases per 100 000 people.[3,4] It requires prompt recognition, however, as it can put patients at substantial risk of morbidity and mortality.[5] The condition causes greatly increased blood perfusion to the skin and can result in hypothermia and high output cardiac failure. Serum albumin levels are generally low, which could result in extracellular fluid shifts and edema.[2]

Several medical conditions (**Table 1**[2]) and drug reactions (**Table 2**[1,2]) have been associated with secondary erythroderma; psoriasis, atopic or contact dermatitis, drug reactions, and cutaneous T-cell lymphoma are the most common.[2] Almost a third of cases are idiopathic and are referred to as primary erythroderma. Primary erythroderma is

Table 1. Medical conditions associated with erythroderma

CUTANEOUS
Psoriasis
Pityriasis rubra pilaris
Atopic dermatitis
Contact dermatitis
Chronic actinic dermatitis
Cutaneous T-cell lymphoma (including mycosis fungoides, Sézary syndrome)
Pseudolymphoma
Bullous pemphigoid
Pemphigus
INFECTIOUS
Dermatophytosis
Toxoplasmosis
Histoplasmosis
Leishmaniasis
HIV
Norwegian scabies
HEMATOLOGIC
Hodgkin and other lymphomas
Leukemia
Myelodysplasia
SYSTEMIC
Sarcoidosis
Subacute cutaneous lupus
Dermatomyositis
Histiocytosis
Thyrotoxicosis
Acute graft-versus-host disease
Posttransfusion
NEOPLASTIC
Thyroid
Lung
Liver
Breast
Ovary and fallopian tube
Prostate
Stomach, esophagus, and rectum
Melanoma

Data from Rothe et al.[2]

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Table 2. Medications causing erythrodermalike skin eruptions

A
- Acetylsalicylic acid
- Allopurinol
- Amiodarone
- Amitriptyline
- Antimalarials
- Aztreonam

B
- Barbiturates
- Bupropion

C
- Captopril
- Carbamazepine
- Chlorpromazine
- Cimetidine
- Cisplatin
- Clodronate
- Clofazimine
- Codeine

D
- Dapsone
- Diazepam
- Diltiazem
- Doxycycline

E
- Enalapril
- Ephedrine

F
- Fluconazole
- Fluorouracil
- Furosemide

G
- Gemfibrozil
- Gentamicin
- Gold
- Griseofulvin

I
- Imipramine
- Indinavir
- Indomethacin
- Iodine
- Isoniazid
- Isosorbide dinitrate

L
- Lithium

M
- Mefloquine
- Mercurials
- Methylphenidate
- Minocycline

N
- Naproxen
- Neomycin
- Nifedipine
- Nitrofurantoin

O
- Omeprazole

P
- Penicillin
- Phenolphthalein
- Phenothiazines
- Phenylbutazone
- Phenytoin

Q
- Quinidine
- Quinine

R
- Ranitidine
- Retinoids
- Rifampin

S
- Streptomycin
- Sulfasalazine
- Sulfonamides
- Sulfonylureas

T
- Terbinafine
- Tetracycline
- Thiazides
- Timolol eye drops
- Tobramycin
- Trimethoprim

V
- Vancomycin
- Verapamil

Z
- Zidovudine

Data from Freedberg et al[1] and Rothe et al.[2]

associated with later development of cutaneous T-cell lymphoma in a few patients. A thorough history can help in identifying the primary cause of erythroderma and should include patients' medications, previous skin conditions, allergies, and other medical conditions.

Erythroderma usually evolves over months to years. Acute-onset erythroderma has been associated with drug reactions, pityriasis rubra pilaris, and pemphigus. In addition to generalized erythema and exfoliation, patients sometimes present with malaise, fever or hypothermia, pruritus, diffuse alopecia, keratoderma, nail dystrophy, ectropion, pitting edema, lymphadenopathy, tachycardia, and high output cardiac failure.[2]

Several laboratory investigations can be helpful in establishing the underlying cause and could reveal anemia, leukocytosis with eosinophilia, increased erythrocyte sedimentation rate, hypoalbuminemia, and hyperglobulinemia. Immunoglobulin E levels might be high in patients with underlying atopic dermatitis. Peripheral blood smear and bone marrow biopsy are advised for patients with suspected leukemia. Flow cytometry might help to establish underlying lymphoma. Patients suspected of or at risk for HIV infection would benefit from HIV testing. Skin scrapings might help confirm suspected dermatophytosis or infection with Norwegian scabies. Skin biopsy, which could reveal the underlying cause, is strongly recommended, and might need to be repeated to establish diagnosis.

Imaging studies, such as x-ray examination, computed tomography, and magnetic resonance imaging scans, are advised, depending on the suspected medical condition. In paraneoplastic erythroderma, skin changes sometimes occur several months or years before diagnosis of malignancy; patients with persistent erythroderma without known cause should be screened for occult malignancy at regular intervals.[6] Consultation with a dermatologist is strongly recommended.

Initial management of erythroderma focuses on correcting fluid and electrolyte imbalances. Oral antihistamines might relieve pruritus. Topical treatments include oatmeal baths followed by application of bland emollients and low-potency corticosteroids. In suspected drug-induced cases, discontinuing medication is mandatory. Hospitalization should be considered for patients with high output cardiac failure and systemic disease. Secondary management focuses on identifying and treating the underlying cause. Acitretin, isotretinoin, cyclosporin, systemic corticosteroids, or other immunosuppressives can be used, depending on the underlying cause.

References

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