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Pityriasis Rosea

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Introduction

Pityriasis rosea is an acute self-limiting papulosquamous disorder. It is characterized by a herald patch followed by scaly oval patches on the trunk and proximal extremities in a "Christmas-tree" appearance. Pityriasis rosea means rose-colored scale. Pityriasis rosea is also known as pityriasis circinata, roseola annulata, and herpes tonsurans maculosus. The skin eruption usually lasts 6-8 weeks and begins with a 'herald patch.' [1][2][3]

Etiology

The exact cause of pityriasis rosea is not known, but features like seasonal variation and clustering in communities suggest that it is an infectious disease. Infections like viruses, bacteria, spirochetes, and noninfective causes like atopy and autoimmunity are known causes. Upper respiratory tract infections that precede pityriasis rosea suggest a role of *Streptococcus*. Recently, reactivation of latent human herpesvirus-6 and human herpesvirus-7 infection have been found as the possible etiologic agents. Pityriasis rosea-like eruptions have been reported after vaccinations such as Bacillus Calmette-Guerin (BCG), influenza, H1N1, diphtheria, smallpox, hepatitis B, and *Pneumococcus*. Eruptions have also been seen with drugs like gold, captopril, barbiturates, D-penicillamine, and clonidine. In temperate regions, it is more common in the winter season, while in tropical areas some seasonal variation is noted.[4][5][6]

Epidemiology

The approximate incidence of pityriasis rosea is 0.5% to 2%. It affects people of both genders, typically between 15 and 30 years of age, but it also affects older adults and children.[7]

Pathophysiology

A lack of natural killer (NK) cell and B-cell activity in pityriasis rosea lesions has been noted, suggesting a predominantly T-cell mediated immunity. Increased amounts of CD4 T-cells and Langerhans cells are present in the dermis, possibly reflecting viral antigen processing and presentation. Anti-immunoglobulin M (IgM) keratinocytes have been found in patients with pityriasis rosea. This may be associated with the exanthem phase of viral infection.

Histopathology

Skin biopsy is not necessary but if performed will reveal non-specific features similar to those seen in chronic dermatitis.

History and Physical

Pityriasis rosea is clinically characterized by a herald patch or mother patch followed by scaly oval plaques on the trunk and proximal extremities along the Langer’s lines of cleavage giving characteristic “Christmas-tree" appearance. Collarette scaling is common. The eruption is usually preceded by a prodrome of a sore throat, gastrointestinal disturbance, fever, and arthralgia.

Pruritus is severe in 25% of cases. Herald patch is seen in 50% to 90% cases and is located on the trunk followed by the neck or proximal extremity.

A generalized eruption then occurs, in which numerous lesions develop in crops over a period of one to two weeks

after the onset of the herald patch. The eruptions are symmetric and most commonly involve the thorax, back, abdomen, and adjoining areas of the neck and extremities. These secondary lesions occur as macules and papules that are elliptical or ovular in shape. Fine scaling and central wrinkling, with a cigarette paper aspect, are seen. A characteristic feature is the collarette appearance of the scale, with edges peripherally attached and lifted up near the center of the lesion. The distribution of the lesions is usually bilateral and diffuse, with the long axis running parallel to skin tension lines.

The incidence of atypical pityriasis rosea is 20% which may be in regard to morphology, size, distribution, course, or symptoms.

The various atypical morphologies include:

- Vesicular Pityriasis Rosea presents as a generalized eruption of 2 mm to 6 mm vesicles or as a rosette of vesicles mainly over the head, palms, and soles. It needs to be differentiated from varicella and dyshidrosis. It is commonly seen in children.
- Purpuric (hemorrhagic) Pityriasis Rosea presents as macular purpura on skin or oral mucosa.
- Urticarial Pityriasis Rosea
- Generalized Papular Pityriasis Rosea is rare and is seen in young children, pregnant women, and African Caribbeans. It presents as multiple papules that occur along with classic patches and plaques.
- Lichenoid Pityriasis Rosea is observed in the course of atypical Pityriasis Rosea, but it is more commonly caused by drugs such as gold, captopril, barbiturates, D-penicillamine, and clonidine.
- Erythema multiforme-like Pityriasis Rosea: It presents with targetoid lesions along with the classical lesions of pityriasis rosea. Histopathologically, erythema multiform and pityriasis rosea may show similar features except for satellite cell necrosis which is a distinguishing feature seen only in erythema multiform where lymphocytes are seen attached to scattered necrotic keratinocytes.
- Follicular Pityriasis Rosea: The secondary lesions are typically follicular and present discrete or in groups associated with classical lesions. Differential diagnoses include follicular lichen planus and keratosis pilaris ad atopic dermatitis with a follicular element.
- Giant Pityriasis Rosea is rarely reported and was named after Darier. It consists of plaques and circles of very large sizes ranging from 5 cm to 7 cm with individual lesions reaching the size of the palm of the patient.
- Pityriasis Rosea presenting as exfoliative dermatitis
- Pityriasis Rosea with atypical herald patch may be absent in 20% of patients or present with secondary eruptions or occur at unusual sites such as the face, scalp, genitalia, or other sites.
- Inverse Pityriasis Rosea: Lesions are predominantly present in acral and flexural areas involving axilla, groin, and face.
- Acral Pityriasis Rosea: Lesions are more concentrated over acral parts of body ie palms and soles, where EM, syphilis, necrolytic acral erythema, and drug eruptions should be kept as differentials.
- Unilateral Pityriasis Rosea is a rare variant that can be seen in both children and adults, and the lesions are located on one side of the body. The patient has a herald patch with classical secondary lesions.
- Blaschkoid Pityriasis Rosea: Lesions of Pityriasis Rose follows the lines of Blaschko.
- Limb-Girdle Pityriasis Rosea: Also known as Pityriasis Rosea of Vidal where eruptions are limited to shoulders or pelvic girdle, thus involving axilla and groin. Lesions are usually larger and more annular.
- Mucosal involvement in pityriasis rosea is seen in 16% of patients affecting oral mucosa, with punctuate, erosive, bullous, hemorrhages, ulcers (with or without raised borders), petechiae, papulovesicular, bullae, and erythematous plaques.
- Localized pityriasis rosea: Eruptions are localized to one part of the body.

The rashes of pityriasis rosea usually last for five weeks and resolve by 8 weeks in more than 80% of patients. Pityriasis rosea needs to be differentiated from secondary syphilis, dermatophytosis, guttate psoriasis, nummular eczema, pityriasis lichenoid chronic, cutaneous T-cell lymphoma, erythema annular centrifugal and erythema chronic migrans.

Evaluation

Dermatoscopy helps to differentiate pityriasis rosea from other conditions. It shows a yellowish background color, a peripheral arrangement of the scales, and a patchy distribution of loosely arranged dotted vessels.

Histopathology shows superficial perivascular dermatitis. Focal parakeratosis in mounds, hyperplasia, and focal spongiosis are observed in the epidermis. The epidermis may show exocytosis of lymphocytes, variable spongiosis, mild acanthosis, and a thinned granular layer. Extravasated red blood cells along with a perivascular infiltrate of lymphocytes, histiocytes, and eosinophils are seen in the dermis.[2][8][9]

Treatment / Management

Pityriasis rosea is a self-limiting, exanthematous disease. Most patients need emollients, antihistaminics, and topical steroids. Macrolides and acyclovir lead to faster resolution of lesions and help to relieve pruritus. Narrowband ultraviolet B therapy is also used. It works by altering the immune response in the skin.[10]

Differential Diagnosis

- Erythema multiforme
- Guttae psoriasis
- Kaposi sarcoma
- Lichen planus
- Parapsoriasis
- Pediatric syphilis
- Pityriasis alba
- Seborrheic dermatitis
- Tinea corporis
- Tinea versicolor

Pearls and Other Issues

Atopy is associated with pityriasis rosea. Pityriasis rosea during pregnancy, within the first 15 weeks of gestation, may cause premature delivery and fetal demise.

Enhancing Healthcare Team Outcomes

In the majority of patients, pityriasis is a self-limited condition with an excellent prognosis. However, about 2-3% of patients will experience a recurrence. The skin disorder is benign, non-contagious and does not require any special precautions. Since the majority of patients first present to their primary care provider when the skin lesions appear, it is important for the nurse, pharmacist and primary care provider to educate the patient that the condition is benign and will not last for more than 2 months. For cases that are severe, a dermatology referral should be made. The biggest morbidity is due to pigmentation changes, especially in dark-skinned individuals. However, scarring does not occur. There are reports that pityriasis during pregnancy may be associated with premature birth- but it is not known if this is just a coincidental observation. Patients should be told to avoid applying irritants to the skin and avoid tanning. The itching is mild and usually resolves with a moisturizer. Exposure to the sun may induce pigmentary changes and

should be avoided. [11][12] (Level V)

Continuing Education / Review Questions

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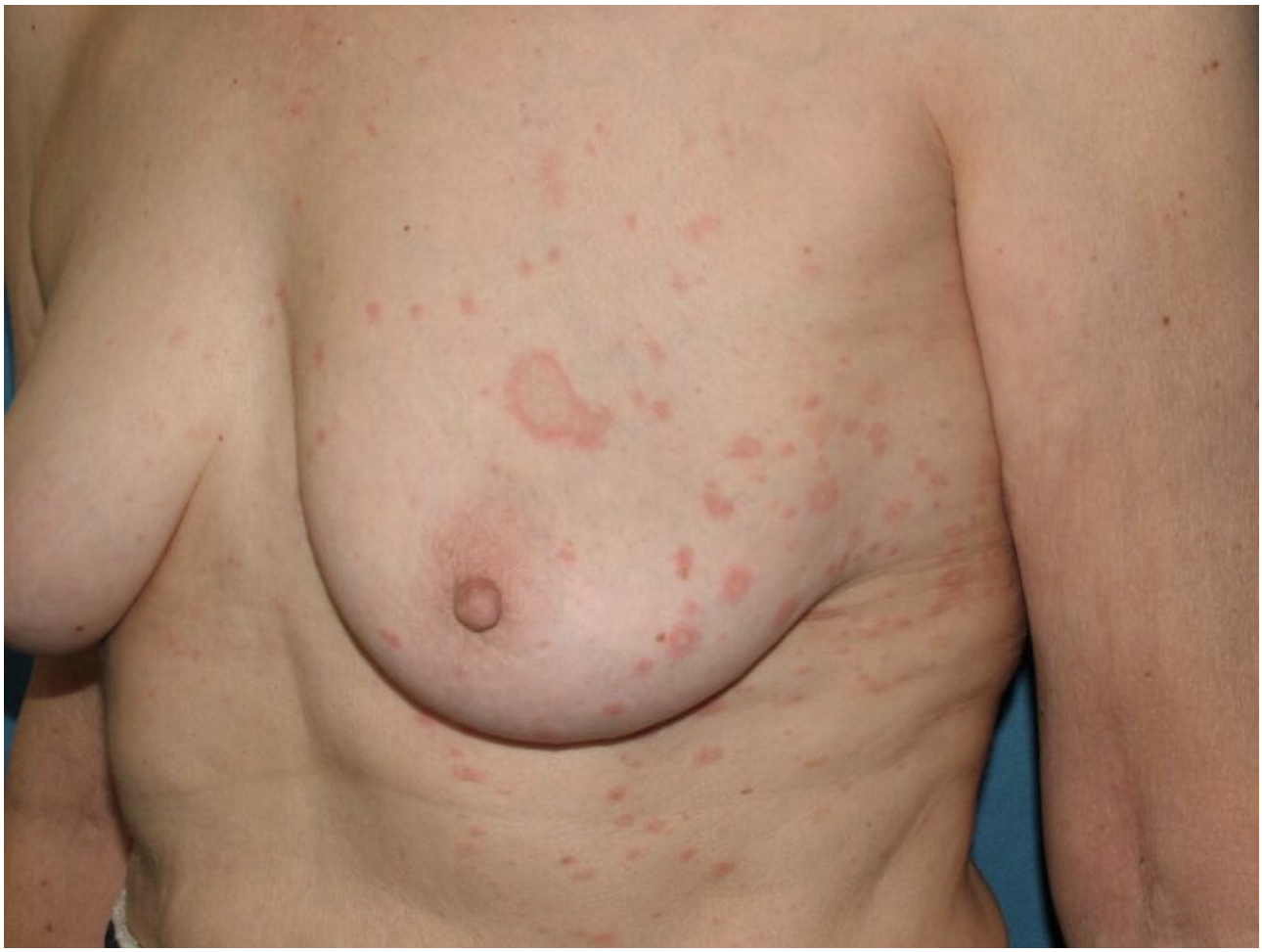
References

1. Drago F, Ciccarese G, Parodi A. Pityriasis rosea and pityriasis rosea-like eruptions: How to distinguish them? JAAD Case Rep. 2018 Sep;4(8):800-801. [PMC free article: PMC6142012] [PubMed: 30246131]
2. Trayes KP, Savage K, Studdiford JS. Annular Lesions: Diagnosis and Treatment. Am Fam Physician. 2018 Sep 01;98(5):283-291. [PubMed: 30216021]
3. Chang HC, Sung CW, Lin MH. The efficacy of oral acyclovir during early course of pityriasis rosea: a systematic review and meta-analysis. J Dermatolog Treat. 2019 May;30(3):288-293. [PubMed: 30109959]
4. Gay JT, Huq M, Gross GP. StatPearls [Internet]. StatPearls Publishing; Treasure Island (FL): Sep 10, 2020. Herald Patch. [PubMed: 30020673]
5. Engelmann I, Ogiez J, Ogiez L, Alidjinou EK, Lazrek M, Dewilde A, Hober D. Relapsing Pityriasis Rosea With HHV-7 Reactivation in an 11-Year-Old Girl. Pediatrics. 2018 May;141(5) [PubMed: 29674359]
6. Alame MM, Chamsy DJ, Zaraket H. Pityriasis rosea-like eruption associated with ondansetron use in pregnancy. Br J Clin Pharmacol. 2018 May;84(5):1077-1080. [PMC free article: PMC5903224] [PubMed: 29520857]
7. VanRavenstein K, Edlund BJ. Diagnosis and management of pityriasis rosea. Nurse Pract. 2017 Jan 20;42(1):8-11. [PubMed: 28002142]
8. Rodriguez-Zuniga M, Torres N, Garcia-Perdomo H. Effectiveness of acyclovir in the treatment of pityriasis rosea. A systematic review and meta-analysis. An Bras Dermatol. 2018 Sep-Oct;93(5):686-695. [PMC free article: PMC6106661] [PubMed: 30156618]
9. Sonthalia S, Kumar A, Zawar V, Priya A, Yadav P, Srivastava S, Gupta A. Double-blind randomized placebo-controlled trial to evaluate the efficacy and safety of short-course low-dose oral prednisolone in pityriasis rosea. J Dermatolog Treat. 2018 Sep;29(6):617-622. [PubMed: 29363373]
10. Krishnamurthy K, Walker A, Gropper CA, Hoffman C. To treat or not to treat? Management of guttate psoriasis and pityriasis rosea in patients with evidence of group A Streptococcal infection. J Drugs Dermatol. 2010 Mar;9(3):241-50. [PubMed: 20232586]
11. Cook B, Crutchfield CE. Pityriasis rosea. Dermatol Nurs. 2006 Aug;18(4):370. [PubMed: 16948385]
12. Black JB, Pellett PE. Human herpesvirus 7. Rev Med Virol. 1999 Oct-Dec;9(4):245-62. [PubMed: 10578120]

Figures



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