Thomas Jefferson University
Jefferson Digital Commons

Department of Family & Community Medicine Faculty Papers

Department of Family & Community Medicine

August 2006

Photo quiz - pruritic rash after ocean swim

James Studdiford
Thomas Jefferson University, james.studdiford@jefferson.edu

Let us know how access to this document benefits you

Follow this and additional works at: http://jdc.jefferson.edu/fmfp

Part of the Knowledge Translation Commons

Recommended Citation

Studdiford, James, "Photo quiz - pruritic rash after ocean swim" (2006). *Department of Family & Community Medicine Faculty Papers.* Paper 3.
http://jdc.jefferson.edu/fmfp/3

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's Academic & Instructional Support & Resources Department (AISR). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in Department of Family & Community Medicine Faculty Papers by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.

Photo Quiz - Pruritic Rash After Ocean Swim

Authors: James S. Studdiford, MD, FACP, Clinical Associate Professor, Department of Family and Community Medicine, Thomas Jefferson University; Andrew J. Foy Jr., BS, Jefferson Medical College, Class of 2008; Janis Bonat, MSN, CRNP, Nurse Practitioner, Jefferson Family Medicine Associates, Thomas Jefferson University

Corresponding Author: James S. Studdiford, MD, FACP
Department of Family and Community Medicine
Thomas Jefferson University
1015 Walnut Street, Suite 401
Philadelphia, Pennsylvania 19107
Phone: (215) 955-1333 Fax: (215) 955-9158
Email: james.studdiford@jefferson.edu

Case Report: C.O., a 29 year old female, presented to the office complaining of a pruritic rash. The patient reports returning from a 3 day trip to Cancun, Mexico. On day three of her vacation she took a swim in the ocean, returned to her room for a shower and within minutes became aware an itching sensation on her skin. Over the next 24 hours she developed the rash. Examination of this patient revealed an eruption of discrete, erythematous papules confined to the area that was covered by her bathing suit. The papules were especially numerous on the buttocks and breasts and abdomen.

Question: Considering this patient's history and the nature of the eruption, which one of the following is the most likely diagnosis?

A) Cercarial or diver's dermatitis

B) Cutaneous reaction to arthropod bites

C) Secondary syphilis

D) Varicella

E) Seabather's eruption

Discussion

The answer is seabather's eruption (SE). Physicians should suspect SE in patient's with a history of exposure to seawater followed by a papular, pruritic rash affecting the areas of the skin covered by the swimsuit. SE is a benign clinical syndrome caused by the stings of cnidarian larvae that resolves spontaneously [1]. SE has been reported predominately in south Florida and the Caribbean however, it is important to note for clinicians that cases of SE have been reported along the East Coast of the United States[1]. Therefore, clinicians should not be discouraged from diagnosing SE in patients with characteristic findings of the disease even if the patient's exposure to seawater happened outside of south Florida or the Caribbean (i.e., New York beaches).

The characteristic lesion defining SE is an intensely pruritic, vesicular, or macropapular eruption, primarily affecting skin surfaces covered by swimwear and may also affect skin areas where friction occurs (i.e., armpits)[1]. Symptoms usually begin within 24 hours of ocean exposure, last 3 to 5 days, and resolve spontaneously, however, there have been a few cases documented in the literature involving severe symptoms and long-term sequale[1,2]. Several patients have even reported local or vesicular eruptions that periodically recur up to a year after initial exposure[1].

One observation that may be perplexing to clinicians, especially when considering the diagnosis of SE, is that some persons develop symptoms while others swimming in the same area do not. For example, a clinician may assume (and would be incorrect in doing so) that a lesion is not SE if a patient reports that their children and spouse swimming in the same area did not develop lesions. Tomchik et al. proposed that host factors, varying levels of exposure among individuals caused by different styles of swimwear and variable length of ocean activity may contribute to this observation[1].

The diagnosis of SE is made on clinical grounds alone and should be made following the observation of a vesiculopapular or urticarial eruption on skin areas covered by a swimsuit 4 to 24 hours after ocean exposure[1] – it crucial for clinicians to recognize that exposure may occur in any ocean waters and is not limited to south Florida and the Caribbean.

The dermatological lesions may be confused with insect bites, varicella, other viral exanthems, syphilis, or urticaria from other causes. Prior exposure to ocean water is a key determining factor to help rule in SE however, exposure to ocean water can not be the only factor because there is another prominent dermatitis caused by exposure to the sea. In 1991, a cercarial dermatitis outbreak was reported at a state park beach off the coast of Delaware[3]. This type of dermatitis has also been referred to as diver's dermatitis (DD) and is not caused by the same organisms that are responsible for SE[3,4]. The key differentiating

factor between DD and SE is that the lesions of DD occur on the exposed areas of the skin - those of SE occur on skin areas covered by the bathing suit and skin areas where friction occurs (i.e., armpits)[3,4].

Systemic symptoms such as fever and headache can also accompany skin lesions in cases of SE and should not discourage the diagnosis of SE if the history and lesions suggest SE[1]. Due to the occurrence of high fevers which can accompany SE, there have been reports of clinicians performing complete meningitis work-ups on children with SE.

Cutaneous reactions to arthropod bites (CRAB) such as chiggers may present as intensely pruritic, papular/urticarial lesions that are generally localized to the ankles or legs. While systemic signs such as fever can develop in sensitized individuals as can occur in SE, the anatomic location of the lesions serve to distinguish chigger bites from SE.

The dermal manifestations of secondary syphilis in adults are polymorphous, generalized lesions appearing as scaling, copper-colored macules and papules often involving the palms and soles. The lesions are neither vesicular nor monomorphous as in SE, nor do they occur strictly on the trunk or in a bathing suit distribution[5].

Varicella is a systemic febrile illness of childhood characterized by the gradual appearance of a diffuse vesicular eruption which starts on the trunk and moves centrifugally to the face and extremities. It is not confined to the swimsuit

distribution as is SE. Furthermore varicella differs from SE in that it is polymorphous consisting of crops of lesions evolving from papules to vesicles which eventually crust over.

Treatment of SE should be directed toward the symptoms using antihistamines, antipruritic agents, and topical steroids[1]. In severe or unremitting cases, steroids administered by other routes may be attempted[1]. It is important for clinicians to remember that SE will resolve spontaneously.

References

1. Tomchik RS, Russell MT, Szmant AM, Black NA. Clinical Perspectives on Seabather's Eruption, Also Known as "Sea Lice." *JAMA* 1993;269(13):1669-1672.
2. MacSween RM, Williams HC. Lesson of the Week: Seabather's eruption – a case of Caribbean itch. *BMJ* 1996; 312(7036):957-958.
3. Cercarial dermatitis outbreak at a state park – Delaware, 1991. MMWR Morb Mortal Wkly Rep. 1992;41:225-228.
4. Parrish DO. Seabather's Eruption or Diver's Dermatitis? *JAMA* 1993;270(19):2300-2301.
5. Golden MR, Marra CM, Holmes KK. Update on syphilis: resurgence of an old problem. *JAMA* 2003;290(1):1510-1514.
6. Skin, Sun and Sea Related Conditions. www.travel-essentials.co.nz/skin-sun-sea.asp. Travel Essentials Ltd. 2004.