

Seabather's eruption: description of a new clinical manifestation

Keywords: Seabather's eruption, Koebner phenomenon, Dermatitis, Jellyfish, Cnidaria.

Dear Editor

Seabather's eruption (SBE) is an acute dermatitis caused **due to** contact with the scyphomedusae *Linuche unguiculata*, **and** *L. aquila* and, rarely, **the** sea anemone *Edwardsiella lineata*. It is manifested by erythematous and itchy papules located often in areas covered by bathing suits during or immediately after exposure to sea water.¹⁻⁸ **Here we** report two cases of SBE **resembling** Koebner Phenomenon (KP) as envenomations caused by the hydromedusa *Olindias sambaquiensis* and the scyphomedusa *Chrysaora lactea*, **some of the most** common **jellyfish species in S and SE Brazil**.

Victims were a 7-year-old child and a 19-year-old **man** who had pruritus and erythematous papules that appeared during sea baths in Santa Catarina state, southern Brazil. Both dermatological exams showed erythematous papules of random distribution in the abdomen and gluteal regions, typical of SBE. In the upper and lower limbs, however, erythematous papules distributed linearly with short paths **resembling** KP and envenomations caused by *O. sambaquiensis* and *C. lactea* (Figs 1-2).

The child showed injuries to his parents immediately upon leaving the sea and the young man identified them still in water. Both denied pain and burning, and they did not report presence of tentacles or jellyfish in waters or sand nearby. Treatments with systemic antihistamines and topical corticosteroids were successful, evolving with regression of lesions.

SBE is caused by *L. unguiculata* in Brazil, being frequent in the **area**.²⁻⁴ The knowledge about the dermatitis is not widely disseminated and diagnostic confusions with dermatophytoses and parasitic infestations such as scabies and larva migrans were recently reported.²⁻⁴ Skin lesions are different according to forms of the life cycle of *L. unguiculata* (**ephyra**, adult jellyfish and larvae): contacts or macerations of **ephyra** and **adult** medusae cause erythematous plaques according to their rounded shapes, with sizes of 20-50 mm.^{2,7}

Most envenomations are caused by planula larvae (2-5 mm) found in the water column and when imprisoned, especially under areas covered by bathing suits, they break off activating the cnidocytes with toxins causing irregularly distributed erythematous papules.¹⁻⁷ The polyps (1.8-12 mm) **can produce asexually planula-like particles (planuloids) that are** released into shallow water (up to 20 m deep), but rarely are **correlated** with injuries and there are few descriptions of the types of envenomations.^{7,8}

KP was described in psoriasis in 1871 by Heinrich Koebner. It appears in several diseases, triggered mainly by trauma.² KB was recently described in SBE, showing linear papules in the nail paths triggered by trauma after patients scratch the lesions.² In the present cases, the lesions are compatible with KP, but papules appeared with linear and short paths during sea baths and were not triggered by scratching, suggesting **possible contacts** with polyps **full of planula-like particles**.

In South Brazil, epidemic outbreaks of injuries **caused** by the **jellyfishes** *O. sambaquiensis* and *C. lactea* are frequent, mainly in summer.^{9,10} These cause rounded plaques and papules distributed in short paths, being marks of contact with the body and short tentacles. Intense burning pain is an immediate symptom and skin lesions are usually seen in the affected areas.^{9,10} **On the other hand**, envenomations caused by *L.*

unguiculata, do not allow the visualization of **any round mark** and the **contacts (with any of the life cycle forms)** and cause itching not pain.⁷⁻¹⁰

We conclude that SBE with papules and linear plaques, with no signs of post-itchy trauma caused by nails and arising during sea baths can **resemble** envenomations by the **jellyfish** species *O. sambaquiensis* and *C. lactea*. being a new clinical pattern. ~~(probably caused by contacts with the polypoid phase of *L. unguiculata*.)~~ However, the two entities can be differentiated by the clinical aspects and epidemiology of the diseases.

Acknowledgments

We thank Dr Fábio Lang da Silveira for the photographs of *L. unguiculata* (Fig. 2d-2e).

ACM was supported by CNPq (309440/2019-0).

REFERENCE

1. Haddad Junior V, Cardoso JLC, Silveira FLD. Seabather's eruption: report of five cases in southeast region of Brazil. *Rev Inst Med Trop Sao Paulo* 2001; **43**: 171-172.
2. Rossetto AL, Rossetto AL, Guevara BEK, Haddad Junior V. Seabather's eruption presents Koebner phenomenon? *J Eur Acad Dermatol Venereol* 2020; **34**: e93-e95.
3. Rossetto AL, Cruz CCB, Pereira ICC, Nunes JA, Martins MM, Nicolacópulos T, Rossetto AL, Haddad Junior V. Diagnostic confusion between seabather's

- eruption as well as dermatophytosis and parasitic infestations. *Rev Soc Bras Med Trop* 2020; **53**: e20190462.
4. Rossetto AL, Proença LADO. Seabather's eruption: report of case in northeast region of Brazil. *An Bras Dermatol* 2012; **87**: 472-474.
 5. Eyer-Silva WDA, Pitombo FB, Silva GARD. Seabather's eruption in Ipanema Beach, Rio de Janeiro, Brazil. *Rev Soc Bras Med Trop* 2018; **51**: 119-119.
 6. Guevara BEK, Dayrit JF, Haddad Junior V, Seabather's eruption caused by the thimble jellyfish (*Linuche aquila*) in the Philippines. *Clin Exp Dermatol* 2017; **42**: 808-810.
 7. Segura-Puertas L, Ramos ME, Aramburo C, de la Coteria EPH, Burnett JW. One *Linuche* mystery solved: All 3 stages of the coronate scyphomedusa *Linuche unguiculata* cause seabather's eruption. *J Am Acad Dermatol* 2001; **44**: 624-628.
 8. Silveira FLD, Morandini AC. Asexual reproduction in *Linuche unguiculata* (Swartz, 1788) (Scyphozoa: Coronatae) by planuloid formation through strobilation and segmentation. *Proc Biol Soc Washington* 1998; **111**: 781-794.
 9. Resgalla Jr C, Rossetto AL; Haddad Jr V. Report of an outbreak of stings caused by *Olindias sambaquiensis* Müller, 1861 (Cnidaria: Hydrozoa) in southern Brazil. *Braz J Oceanog* 2011; **59**: 391-396.
 10. Haddad Jr V, Silveira FLD, Migotto ÁE. Skin lesions in envenoming by cnidarians (Portuguese man-of-war and jellyfish): etiology and severity of accidents on the Brazilian coast. *Rev Inst Med Trop S Paulo* 2000; **52**: 47-50.

Figures

Fig. 1 (a-d): Child (7-year-old) at the day of the sting. (a-c): Pruritic and erythematous papules alleatory dispersed in the abdomen (a), legs (b) and left arm (c). (d): Detail of the erythematous papules linearly distributed in the right arm. (e-i): Child 3 days after sting. (e-g): Erythematous papules slightly eczematous and pruritic alleatory distributed in the abdomen (e), legs (f-g). (h-i): Detail of erythematous papules with eczematous appearance linearly distributed in the arm.

Fig. 2 (a-c): 19-year-old man 4 days after the sting. (a): Pruritic and erythematous papules alleatory distributed in the right. (b-c): Details of erythematous papules linearly distributed in the right arms (b) and left leg (c). (d-e): Polypoid stage of *Linuche unguiculata* (Photographs: Fabio L. Silveira). (d): Colony with several polyps (10x). (e): Detail of polyp releasing planula-like particles (planuloids) (40x).