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### Aquagenic urticaria due to sea water contact

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Dear Editor,

Urticaria is a common dermatological problem. Aquagenic urticaria is an important rare type of dermatological disorder. Aquagenic urticaria can be a kind of contact dermatitis to sea water. This problem is rare and is less mentioned in literatures. Within the past few years, this condition becomes the focused interest in medicine. In this short article, the authors review and discuss on this important problem.

According to publication by Kreft *et al.*, aquagenic urticaria is “a rare form of contact urticaria with small wheals generally affecting the upper part of the body”[1]. This condition has been firstly mentioned and published in Journal of the American Medical Association in 1964[2]. Until present, there are less than 100 publications on this problem. Kreft *et al.* noted that “it has to be distinguished from aquagenic pruritus”[1]. Focusing on the skin lesion, “well-defined pin head to small pea-sized wheals surrounded by variable sized erythema provoked by contact with water” on contact skin are, “regardless of its temperature or source” is the hallmark of this dermatological problem. The exact incidence of this problem is still unknown but it is rarely reported[3]. Also, the exact cause of this condition has still been unclarified. There are some reports mentioning the possibility of interrelationship with malignancy[4], but it is still not proven. For management, the antihistamine or anticholinergic medication seems to be useless[5,6]. Nevertheless, McGee *et al.* recently noted that “topical application of a petrolatum-containing cream as a protective coating” could be useful for management of the patient[5].

The aquagenic urticaria after contact with sea water is extremely rare. However, as noted by Luong and Nguyen, the patient with sea water induced aquagenic urticaria can have the problem when contact in either sea or fresh water[6]. Gallo *et al.* proposed that sea water induced aquagenic urticaria is a specific subtype of aquagenic urticaria[7]. This problem can be seen within a few minutes after contact with sea water. Gallo *et al.* said that it is a “salt-dependent subtype of aquagenic urticaria”[7]. Recurrence can be expected. The recent relationship of this condition with epilation is also reported by Gallo *et al.*[8].

As previously mentioned, aquagenic pruritus has to be included in

differential diagnosis of aquagenic urticaria. The sea water induced aquagenic pruritus should also be mentioned in this article. In general, aquagenic pruritus “occurs frequently with polycythemia vera”[9]. Focusing on sea water induced aquagenic pruritus, there has still been no report on this condition. Hence, the diagnosis of sea water induced aquagenic urticaria can be simply made without need to differentiate the condition on sea water induced aquagenic pruritus.

### Conflict of interest statement

We declare that we have no conflict of interest.

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