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Seaweed dermatitis: a case report

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PEER REVIEW

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Comments

Apart from the mentioned concerns in the past topics, this work has high interest and can be published in the present form. It can be a good referencing piece in the future in the limited mentioned problem in medicine. Details on Page 45

ABSTRACT

Seaweed dermatitis is an uncommon kind of dermatitis that might be seen in some clinical centers at coastal area. Here, the authors report a case of seaweed dermatitis. This is a male patient presented to the physician in charge complaining of skin lesion. On examination, the clusters of reddish–brown vesicles along high right leg can be seen. This case was diagnosed to have seaweed dermatitis and treated by steroid therapy.

KEYWORDS

Seaweed, Dermatitis, Steroid therapy

1. Introduction

There are many living things within the ocean. Of several organisms, seaweed is a natural living thing in the sea. Seaweed is a kind of algae and it is considered as primitive living things of our world that has the last long history. As a macroalgae, seaweed can be seen in the marine water and usually deeply located to more than 200 m under sea level[1]. At present, seaweed can be seen in any areas around the world. But the high population is in the tropical zone of the world. In medicine, seaweed is accepted as a good source of nutrition[2]. Many proteins and amino acids can be derived from seaweed[2]. On the other hand, the unwanted effect relating to seaweed can still be detectable. The problem of seaweed in health is not widely mentioned. This is an actual interesting topic in coastal medicine. Because seaweed usually locates in deep sea, hence, the contact to the seaweed is not easy. However, this does not mean that there will not be any contact. Seaweed dermatitis is an uncommon kind of dermatitis that might be seen in some clinical centers at coastal area. Here, the authors report a case of

seaweed dermatitis. The case can be a good case study in coastal medicine.

2. Case report

The indexed case is a 27 years old male patient, who is a master degree study in Marine Science, presented to the physician in charge complaining of skin lesion. He said that he got the skin lesion after contact with the seaweed during his diving work. The skin lesion occurred at his right leg after diving. On examination, the clusters of reddish–brown vesicles along high right leg can be seen (the patient denied photographing). This case was diagnosed to have seaweed dermatitis and treated by steroid therapy. The problem was fully recovered within 1 week.

3. Discussion

Seaweed dermatitis is an important problem to be noted

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in coastal medicine. There are several kinds of seaweed that can cause dermatitis (Table 1)[3–6]. The well-known kind is the blue-green alga namely *Lyngbya majuscula* (*L. majuscula*)[3–4]. The diagnosis of the problem is usually easy since the clear history can usually be given. In case that, dermatopathology examination was done. The result is usually an acute irritant contact dermatitis. However, in some severe cases, lymphadenopathy, pustular folliculitis and additional local infections might be seen[7]. The corresponding toxin is called “lyngbyatoxin A”, which is closely related to a poisonous substance found in *Streptomyces* species[8].

Table 1

Some specific kinds of seaweed that can cause dermatitis.

Kinds	Details
<i>L. majuscula</i> [3,4]	<i>L. majuscula</i> is a blue green algae. It can be found in many seas in tropical zone.
<i>Sargassum muticum</i> [5]	<i>Sargassum</i> is a big brown macroalgae. It can be seen in deep ocean, especially in the tropical zone.
<i>Karenia brevis</i> [6]	This is a toxic algae that can cause a well-known phenomenon “red tide”.

The problem after sea bathing has been proposed for a long time[9]. This problem is sometimes called “seabather’s eruption”[9]. The problem can be as serious as jelly fish allergy but is less mentioned[10]. The first report has just been presented by Grauer and Arnold in 1961[11]. Most of the cases usually directly contact with the problematic algae at naked areas of the patients’ bodies. Of interest, in the present case, the patient wear diving suit during contact with the seaweed, the problem of dermatitis can still occur. Hence, the diving suit might not be effective in protecting wearer from toxic marine living things.

Conflict of interest statement

We declare that we have no conflict of interest.

Comments

Background

This is an report on an interesting case of allergenic algae which is rarely published area of medical research. The application on coastal medicine can be seen. The topic can be useful for tropical world, especially for the countries with limited resources. The idea is good and can be applied in tropical coastal medicine.

Research frontiers

The work seems to be a good case report. An application to rarely mentioned knowledge in tropical medicine for both developed and developing countries with seaside area. This report is highly original. There are not much previous reports algae dermatitis. The literature review already cover those need-to-mentioned publications. The appropriate papers have been added and listed into the references.

Related reports

There are relating reports for sure. As noted, the literature review has to be extended to cover the local databases (many databases for Ayurveda in India, Chinese Medicine, Thai Medicine, etc). The thesis on this aspect can also be seen in many tropical medicine faculties with medical entomology unit. These related reports have to be concerned, summarized and included.

Innovations and breakthroughs

The innovation can be seen. There are good literatures to support. At least, additional data on this interesting case contribute to the field and raise the concern on the problematic macroalgae found in the sea. The preparation of the manuscript is well done and reflects the innovation of the authors’ idea.

Applications

The application can be possible. To verify the application can be seen when the work has been cited. The investigation on this medical problem might be stimulated and the follower can reference this work for further application in study of case diagnosis and management.

Peer review

Apart from the mentioned concerns in the past topics, this work has high interest and can be published in the present form. It can be a good referencing piece in the future in the limited mentioned problem in medicine.

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