

Outbreak factors of drowning on the shores of Japan

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Introduction

Many drownings have occurred on the shores of Japan, and more than 200 lives are lost every year. Preventive measures against water accidents are required.

Objectives

In this study, we analyze actual situations of drowning on the shores of Japan and investigate why these drownings have occurred. Then, we propose measures to prevent or reduce these drownings.

Target

This study targets everyone who is using the shore.

Methods

We investigated drownings on the shores of Japan, using the analysis of lifesaver rescue reports, examinations of the regulation for drowning prevention and coastal safety management systems in Japan, and a numerical simulation using calculations of the nearshore currents around coastal structures.

Results

As a result, we found that many drownings on the shores of Japan have been caused by rip currents. These currents often occur around coastal structures. Another finding is that Japan's emergency response organizations, such as the coast guards, the police departments, the firefighting departments and the lifesaver, lack co-ordination and communication between each other, and have no clear system of responsibility. Also there is no public lifesaving system in Japan. Virtually every lifesaver is employed on a volunteer basis. Furthermore, the regulation about drowning prevention is undeveloped. In addition, the education about water safety in elementary and junior high schools is insufficient.

Discussion

What is the cause of coastal drownings in Japan? How can we prevent drowning?

Conclusion

We conclude drowning on the shores of Japan can be classified into three outbreak factors. The first factor is the environmental conditions such as rip currents around coastal structures. The second factor is the human accidents due to a lack of education, especially insufficient safety education provided in elementary and junior high schools about the ocean. And the third factor is that between Japan's emergency response organizations, the responsibility of coastal public safety is indefinite. Taking this into account, we applied research into drowning on the Shonan Coast in Japan, where these three factors were proved to be true. Moreover, we propose that it is important to consider multiple solutions for the three factors to prevent drowning.

References

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