Laboratory diagnosis in the acute post crisis situation
Reflections on the Haiti earthquake crisis

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Laboratory Investigation in the Post Crisis: What Are Its Problems?

A common finding after the disaster is the wide destruction of infrastructure in the disaster area. In a major disaster, the local medical facilities may be destroyed. In the recent Tsunami disaster, Kost et al reported a situation in Thailand where "the tsunami impacted 48 PCUs plus island and province hospitals, which lacked adequate diagnostic instruments. Sudden overload of critical victims and transportation failures caused excessive mortality." It can be seen that when a setting with limited pre-existing laboratory resources is affected by a disaster, a sudden shortage in laboratory facilities can be expected, associated with a more serious outcome.

What is the way to perform Laboratory Investigation in the Post Crisis Situation?

As already described, in the disaster situation, the partial or total destruction of the standard medical laboratory can be expected, and this will lead to serious limitations in medical laboratory resources. The rescue and aid teams from external sites must be prepared to provide their own laboratory tools for coping with this problem. In the setting of the field hospital, the laboratory technicians are important members of the team of required medical personnel. From the technical aspect, the point of care testing (POCT) based tool can be a good solution for this period. Kost et al have noted that there is a need for assessment, planning and the design of specific POCT tools for coping with disaster.

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situations. Focusing on the recent Katrina hurricane and flooding disaster in the USA, it was reported that “Katrina demonstrated POCT value in disaster responses”. Kost et al also suggested the necessity of POCT for use by the rescue teams. However, an important problem to be considered is the possible impairment in the diagnostic power of the POCT tool due to environmental change in the crisis area. Louie et al noted the need for upgrading of the production process to cope with this problem.

THE STORY OF POST CRISIS LABORATORY INVESTIGATION SHORTAGE IN HAITI

In early January 2010, a strong earthquake hit Haiti and giving rise to one of the biggest disasters in human history. A sudden shortage of medical facilities appeared in the post crisis situation. There is no doubt that almost all the medical laboratories in Haiti were destroyed. The limited resources for medical laboratory evaluation already constituted the basic problem in laboratory medicine in Haiti, and the current disaster critically worsened the overall situation.

As in previous disasters due to earthquakes, the emergence of infectious diseases in the post crisis stage can be expected, and the peak of infection will be reached in a very short time. The implementation of specific laboratory investigation tools for coping with the emerging infectious disease is suggested. Another important laboratory which will need to be established is the medical laboratory for assisting patient identification. Such a facility is needed for the management of unidentified corpses in any disaster.

Finally, based on the fact that Haiti is a poor country and has limited resources, the call for long term help for the reconstruction of medical laboratory facilities, as well as other medical services is required.

References


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