

Editorial

Pediatric Emergency in Japan

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Pediatric emergency system in Japan handles almost all the pediatric patients 24 hours 365days. The diseases that pediatric emergency physicians deal with are many kinds of variety range from mild cases to severe cases. For example, mild cases such as cold and acute enterogastritis can be treated by supportive care. On the other hand, severe cases such as encephalitis or myocarditis should be treated soon as possible or they will die. Although pediatricians only treat intrinsic disease, one of the characteristics of pediatric emergency physicians is that they treat not only intrinsic diseases but also extrinsic diseases.

Current situation of pediatric emergency, Ichikawa reported that 99.9% of the pediatric patients are with mild cases and several patients are rarely part of severe cases [1]. It is point of pediatric emergency that to detect and treat severe patients adequately as soon as possible from the majority of mild patients [2]. If severe patients are not treated accurately, the condition of the disease progresses rapidly, so pediatric emergency physicians are not allowed to miss the patients. One of the useful tools to detect the severe patients is triage system. Triage system such as Canadian Pediatric Triage and Acuity Scale (CTAS) has been practiced in many amounts of emergency departments [3-5]. It is one of the most important roles for pediatric emergency physicians to detect severe patients from a great number of mild cases by providing accurate triage and taking advantage of their own clinical skills.

Although great numbers of patients are not severe, it is pointed out that the beds of Pediatric Intensive Care Unit (PICU) for severe patients have been insufficient in Japan. It is because that PICU beds were built in limited areas, there are many prefectures where there is no PICU beds. Physicians treat severe pediatric patients in Intensive Care Unit (ICU) for adult severe patients in such areas. Ichikawa reported that we need PICU beds for 40,000 children but the PICU beds are absolutely insufficient [1]. Although Takei et al reported that the survival rate of severe pediatric patients was improved by gathering them to PICU, it is difficult for

some areas which have no PICU beds. To solve this problem, long distance transportation by using helicopter or aircraft have been provided, but it has not been enough number. To deal with severe pediatric patients and increase the number of PICU beds are problems to solve from here on.

I think it is a specialized problem for Japan that who treat and manage the severe trauma patients. Normally, severe trauma patients are treated by emergency physicians. Pediatric patients are treated by pediatricians, but they treat only intrinsic disease. Emergency physicians are used to treat severe patients, but they are unfamiliar with children. It is because that they don't have enough opportunity to treat pediatric patients, so they struggle with dose of drugs, selection of devices and vital sign which is different by age. On the other hand, pediatricians often treat intrinsic diseases normally and they hardly treat extrinsic patients such as trauma hence they struggle with handling those patients. Pediatric emergency physicians have trained both emergency medical and pediatric health care. In such situation an important role of pediatric emergency physicians is to connect critical care medicine and pediatric health care but the number of pediatric emergency physicians who play a key role in emergency medicine and pediatric health care is very small. It accounts for 1% of emergency and pediatric physicians. One of the solutions for the problem is clinical system. Pediatric emergency physician stays in emergency department and collaborates with emergency physicians for treating severe trauma children. This collaboration is thought to be improved the survival rate of children [6].

Survival rate of neonate in Japan is one of the best countries in the world. On the other hand, mortality rate of infant is worse than other developed countries. How to improve this problem is one of the most precious subjects for pediatric emergency in Japan [7].

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