

A New Dimension for Anesthesiologists: For Safe Transfer and Management of Critical Ill Patient During Pre Transport and Transport

In modern concept Acute and Emergency Medicine specialty is the part of Anesthesiology. Transfer medicine is the very important component of acute medical care where physician must be competent in the assessment, management, triage and transfer of patients with a range of illnesses and injuries. Transfer Medicine focuses mainly on the retrieval of patients from one health care facility to another for improve treatment or management and diagnostic procedure. This specialty also has good knowledge and understanding of retrieval co-ordination and a variety of land and air transport platforms for acutely ill patients.

Since the modernization and establishment of the Accident, Emergency and ICU service, the demand for this care has grown exponentially. When highly specialized care is required, transfer of critically ill patients becomes necessary. Anywhere in the world critical ill patient in the United Kingdom alone, more than 10,000 patients required secondary transfer in a year . In the USA 1 in 20 patients requiring transfer to another hospital for ICU care. Similar transfer rates probably occur elsewhere.

In the developed county the number of transfer is likely to increase because of supply-demand imbalances. Recognition that centralization of specialist care is associated with reduced mortality rates might generate a new stream of transfers². A recent study conducted in the USA suggested that the lives of 4,000 patients might have been saved in a year had they been transferred to another, better qualified hospital.

During the last decades in Bangladesh the numbers of ICUs and beds with special emergency and accident care have increased significantly. But still is imbalance between demand and actual situation of intensive care and emergency care service. Like developed countries tertiary level ICU, Emergency and Accident care are mostly

centrally situated. Organized transfer system with good knowledge and skill is the backbone of emergency care of critically ill patient. So transfer of all type critical ill patients is very much demanding service but still it is a neglected specialty.

Recently large, and increasing, numbers of critically ill or accident patients require transfer between Emergency and Critical care units both in developed and developing country . It is also inter-unit transfer poses significant risks to critically ill patients, particularly those requiring multiple organ support. While the safety and quality of inter-unit and hospital transfers appear to have improved over the years in developed country, but there is controversy the effectiveness of specific measures to improve safety have not been confirmed by randomized controlled trials.

In different study it is generally accepted that critically ill patients should be transferred by specialized retrieval teams, but the composition, training and assessment of these teams is still a matter of debate. Since it is likely that the numbers and complexity of these transfers will increase in the near future. So most appropriate resuscitation team leader Anesthesiologist plays a key role in proper transport and management of acute, critical and accident patient during the transport process as Anesthesiologist has inherent skill of airway management and resuscitation which is the main component of transfer medicine. It was recommended that earlier transfer, resuscitation before transfer, continuing medical care during the journey, and hence a slower and smoother journey are beneficial to patients .There was proved that, specialized transport team and appropriate hemodynamic stabilization and monitoring, severely ill patients could be transported safely .All of this functions can be properly performed by Anesthesiologists and they can train the other persons adequately.

There were different reports and studies that inter hospital transfers may save lives but these are expensive, logistically challenging, and risky. The transport process itself is associated with a risk of physiological deterioration and adverse events. The incidence of adverse events is proportional to the duration of the transfer, to the pre-transfer severity of illness or injury and to the inexperience of the medical escorts .

In the developed countries transport guidelines were approved during different time with continue reviewing the guidelines and instructed to follow the guidelines by transport team or intensivists . In spite of that still reported adverse events are found up to 70% of transports. So there was urge to follow guidelines continued to emphasize the principles concerning personnel, organization and equipment . But in Bangladesh there is no protocol for transfer the critical patient or management during transport process . But there is no data about any incident which may be occur , many of which appeared to be avoidable.

Most of the Critical event incidents during transfer may be divided into medical and technical causes . Medical adverse events are most often cardiovascular or respiratory events. The most common cardiovascular events are hyper- and hypotension, brady- and tachycardias, and arrhythmias, with a reported incidence varying from 6% to 24%. Respiratory events are most often inadequate ventilation or oxygen desaturation with reported incidences ranging from 0 to 15% . Equipment failure or technical problems are common and may account for 46% of all incidents . Reported incidences vary from 9% to 36% . This high critical incident can be well managed by trained anesthesiologist or other person trained by Anesthesiologist. So transferred by specialized retrieval teams leading by Anesthesiologists or intensivists seems to lower the incidence of medical and technical failure .

In recent time health service of Bangladesh government initiates a central ambulance service with cooperation of private organization for transferring the critical patient . There is also private air ambulance and water vehicle for whole country as well as international air ambulance

services. There were studies that despite the existence of guidelines, inter hospital transfer of the critically ill patient is still associated with avoidable mishaps in developed country. Strikingly, most incidents seem to be preventable. One study reported that up to 91% of incidents were preventable. Factors associated with fewer incidents are good crew for skills/teamwork, checking equipment and the patient, patient monitors and good interpersonal communication. There are three reasons responsible for critical event or unsafe transfer. First one is those have capability, responsibility and authority for the care of the patients transfer are simply not done by them. The second reason is a lack of a motivation for change - we have always some how managed . A third reason might be the lack of evidence that the recommendations have got benefits of the patients.

So health service of different countries are emphasizing the need for standard transfer protocol, training and technical understanding of the equipment used . And also the need for standardized transfer equipment . All this activities are specially performed by the Anesthesiologists and they also make trained transfer team . So we are always ready to help the health service of Bangladesh government by providing this critical ill patients transfer with excellent knowledge of transport medicine . This is the best opportunity of anesthesiologists to involve this special type of acute patient care.

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