Duration of CPR may be a factor in survival, especially for kids

Some patients with in-hospital cardiac arrest can benefit from longer duration of cardiopulmonary resuscitation (CPR), a study has found.

New Delhi, March 02, 2017: In India, sudden Cardiac Arrest claims about 4,280 lives from every 1 lakh of population annually. Despite several medical care advancements, survival rates remain as dramatically low as 5-10%.

A recent study used the American Heart Association’s Get with the Guidelines-Resuscitation (GWTG-R) registry to evaluate a potential association between duration of CPR and survival after in-hospital cardiac arrest.

Of the 3,419 children included in the study, 28% survived to hospital discharge, and 16.6% of these survivors had CPR longer than 35 minutes. A total of 60% of these survivors with longer-duration CPR achieved a favourable neurologic outcome, they reported in the study published in Circulation: Journal of the American Heart Association. In the study among survivors, neurological outcome was favourable for the majority of patients.

Padma Shri Awardee Dr K K Aggarwal, National President Indian Medical Association (IMA) and President Heart Care Foundation of India (HCFI) and Dr RN Tandon – Honorary Secretary General IMA in a joint statement said that “Continuous compression only CPR compresses the heart between the sternum and the backbone and builds up the pressure that keeps the oxygenated blood flowing to the brain and keeps the person alive until a defibrillator becomes available or expert medical help arrives. The earlier you give CPR to a person in cardiac arrest, the greater the chance of a successful resuscitation. In the mid-1990s, authorities considered pediatric CPR futile beyond 20 minutes’ duration or when more than two doses of epinephrine were provided. Even though longer-duration CPR can benefit some children, the reality is that after the first 15 minutes of CPR, survival rate declines rapidly. Survival decreased by 2.1% for every minute of chest compressions over 15 minutes.”
According to the study data, when CPR was longer than 35 minutes, those in the Surgical Cardiac category had the best survival to hospital discharge rate (25%), followed by, Medical Cardiac — 21%; General Surgical — 13%; General Medical — 10% and Trauma — 8%.

“Several previous studies have shown an association between duration of resuscitation attempt in non-survivors (as an indicator of the overall tendency to attempt resuscitation for longer) and the rate of survival to hospital discharge. However, the evidence remains insufficient to recommend a minimum duration for an in-hospital resuscitation attempt; instead, the duration should be determined on a case-by-case basis and take into account other known determinants of survival. This would be my recommendation to the physicians”, added Dr K K Aggarwal.

Besides immediate CPR, rapid defibrillation, and 1–2 mg of epinephrine, no other intervention has been demonstrated to increase the likelihood of return of spontaneous circulation (ROSC). Recently, even the long-term benefits of epinephrine have been questioned. Among survivors, neurological outcome was favourable for the majority of patients. Performing CPR for >20 minutes is not futile in some patient illness categories.

Heart Care Foundation of India Hands- Only CPR 10 mantra is: Within 10 minutes of death (earlier the better), for a minimum of 10 minutes (adults 25 minutes and children 35 minutes), compress the center of the chest of the deceased person continuously and effectively with a speed of 10×10 = 100 per minute.

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About IMA: Indian Medical Association is the only representative, national voluntary organization of Doctors of Modern Scientific System of Medicine, which looks after the interest of doctors as well as the well being of the community at large. It has its Headquarter in Delhi and State / Terr. Branches in 30 States and Union Territories. It has over 2, 60,000 doctors as its members through more than 1765 active local branches spread across the country.

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