Results Baseline measurements were similar in both HS and TXA groups. Both groups showed a significant reduction in mean arterial pressure (MAP) after bleeding compared to baseline values, however at the end of the fluid resuscitation MAP was significantly higher in the TXA group (62.67 ± 13.17 vs 92.20 ± 22.35 mmHg, $p < 0.01$). Echocardiographic stroke volume (SV) and left ventricle ejection fraction (LVEF) were higher in the TXA group at the end of both fluid resuscitation and blood transfusion phases (SV: 32.42 ± 5.83 vs $45.23 \pm 13.76\%$ and 35.11 ± 14.62 vs $43.68 \pm 13.92\%$, p not significant; LVEF: 65.9 ± 5.3 vs $77.8 \pm 4.7\%$, $p = 0.05$ and 61.5 ± 8.2 vs $76.3 \pm 4.3\%$, $p < 0.01$). No significant differences were observed in mixed venous saturation (SvO₂) and lactate levels, despite SvO₂ remained higher in the TXA group throughout the experiment except at baseline.

Conclusion In this experimental model of HS the enteral administration of TXA was associated with a global improvement in hemodynamics; however, only small benefits were observed on mixed venous saturation and lactate levels.

REFERENCE

- Schmid-Schönbein GW. 2008 landis award lecture. Inflammation and the autodi-gestion hypothesis. *Microcirculation* 2009;**16**(4):289–306.

Conflict of interest None

Funding None

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TRANSPORT, DELAY TO CARE AND PATIENT EXPERIENCE IN PRE-CLINICAL EMERGENCY SYSTEMS IN DHAKA CITY, BANGLADESH: A MIXED METHODS STUDY

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10.1136/10.1136/bmjopen-2018-EMS.87

Aim Loss of life and ensuing disabilities after medical emergencies due to the lack of proper pre-hospital care is of a global health concern in mega-cities with under resourced and constrained local health systems, also in Dhaka city, Bangladesh. The study aimed at improving the pre-hospital emergency systems in Dhaka.

Method To measure transport capabilities, delay times, 1 week observational study each of 4 selected hospitals in Dhaka was conducted in July 2017. Available medical records were analysed. Additionally, 56 emergency patients' relatives and 23 stakeholders were interviewed.

Results Cardiovascular diseases, accidents and suicide occurred 46% of total deaths ($n=13707$) in 2015 in study hospitals in Dhaka. Of the recorded 734 emergency patients in 4 hospitals, 63% arrived by rickshaws/motor-rickshaws and 25.7% by bus/car, while only 11.3% used ambulances. 56% patients arrived after 1 hour or later. 80.4% patient's relatives did not wait for ambulances due to unavailability or not knowing phone number. The median delay (call-hospitalisation) of ambulances was 85 min (day 102, night 45). Ambulances' utilisation rate was only 10% of their total time. Ambulances were equipped with a driver, oxygen and rarely with first aid box. Besides the non-existence of pre-hospital care (detection-hospitalisation), service providers' and managers' concerns were: deficit of policy, no coordination centre and unique phone number, corruption and traffic-jam.

Results The long transportation delay and under-use of ambulances were responsible for many deaths and disabilities in

Dhaka. More evidence on determinants of sub-optimal care in this context and effective interventions to improve pre-clinical emergency systems in Dhaka is needed.

Conflict of interest None

Funding The study was supported by Björn Steiger Stiftung and approved by the Ethic Committee of University of Freiburg, Germany (Approval No. 165/17).

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GOVERNMENTAL IMPLEMENTATION OF COMMUNITY BYSTANDER DEFIBRILLATION PROGRAM AND GOOD NEUROLOGICAL OUTCOME IN OUT-OF-HOSPITAL CARDIAC ARREST (OHCA)

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10.1136/10.1136/bmjopen-2018-EMS.88

Aim We examined the effect of governmental implementation of community-wide bystander defibrillation program on good neurological outcome in patients after OHCA during a four-year prospective follow-up period.

Method A prospective 4 year community-wide observational database collected from an OHCA e-Registry in a metropolitan was studied, after a citywide bystander defibrillation rescue program had been launched by the government that legitimised the strategic provision of AEDs (automated external defibrillators) in certain public locations and electronically registered the devices. Outcomes included 2-hour sustained ROSC (return of spontaneous circulation) at hospital, survival to hospital discharge, and good CPC (Cerebral Performance Category Scale 1 or 2). All patient prehospital characteristics and outcome relations were evaluated and adjusted by regression analysis.

Results The density of public AEDs distribution increased from 0.85 to 6.24 per square kilometres in the studied 4 years. Among a total of 12,368 OHCA, 1210 occurred in public locations, and 52 patients (male for 83%, witnessed arrest for 77%) received bystander aid by public accessed AED and CPR rescue. For these 52 patients, 44.2% (23/52) achieved prehospital ROSC at scene or during transport, 67.3% (35/52) achieved sustained ROSC after resuscitation at hospital, 44.2% (23/52) achieved survival-to-discharge and noticeably all those 23 (100%, 23/23) survival-to-discharge patients achieved excellent neurological outcome of CPC 1. Their outcomes were significantly better (67.3 vs 26.5%, OR: 5.7 [95% CI: 3.2 to 10.4] for sustained ROSC; 44.2 vs 10.1%, OR: 7.0 [95% CI: 3.9 to 12.6] for survival-to-discharge; 44.2 vs 6.6%, OR: 11.6 [95% CI: 6.4 to 21.2] for good CPC 1 or 2, and 100 vs 62.9% for good CPC among survival-to-discharge) compared with those without public accessed AED plus CPR rescue. In all 52 patients, there was one man without prehospital ROSC still achieved survival-to-discharge and good CPC.

Conclusion In our study, we found that governmental implementation of bystander defibrillation rescue program was significantly associated with excellent neurological outcome of CPC 1 and higher survival to hospital discharge. It would be noticeably in our community that by this rescue program all patients achieving survival-to-discharge could achieve excellent CPC1.

Conflict of interest None

Funding None