Pakistan- Current state of OHCA, steps taken to improve survival and challenges faced"

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Introduction

- Karachi
  - 4th largest city, population of 27 million

    (Brinkhoff, Thomas. "The Principal Agglomerations of the World". citypopulation.de. City Population. Retrieved 8 April 2015)

  - does not have a government owned or sponsored emergency medical service and first responder system

  - The role of emergency transfers from community settings to hospitals is played by non-governmental charity organizations or privately by patients' attendants via their own or public transport.
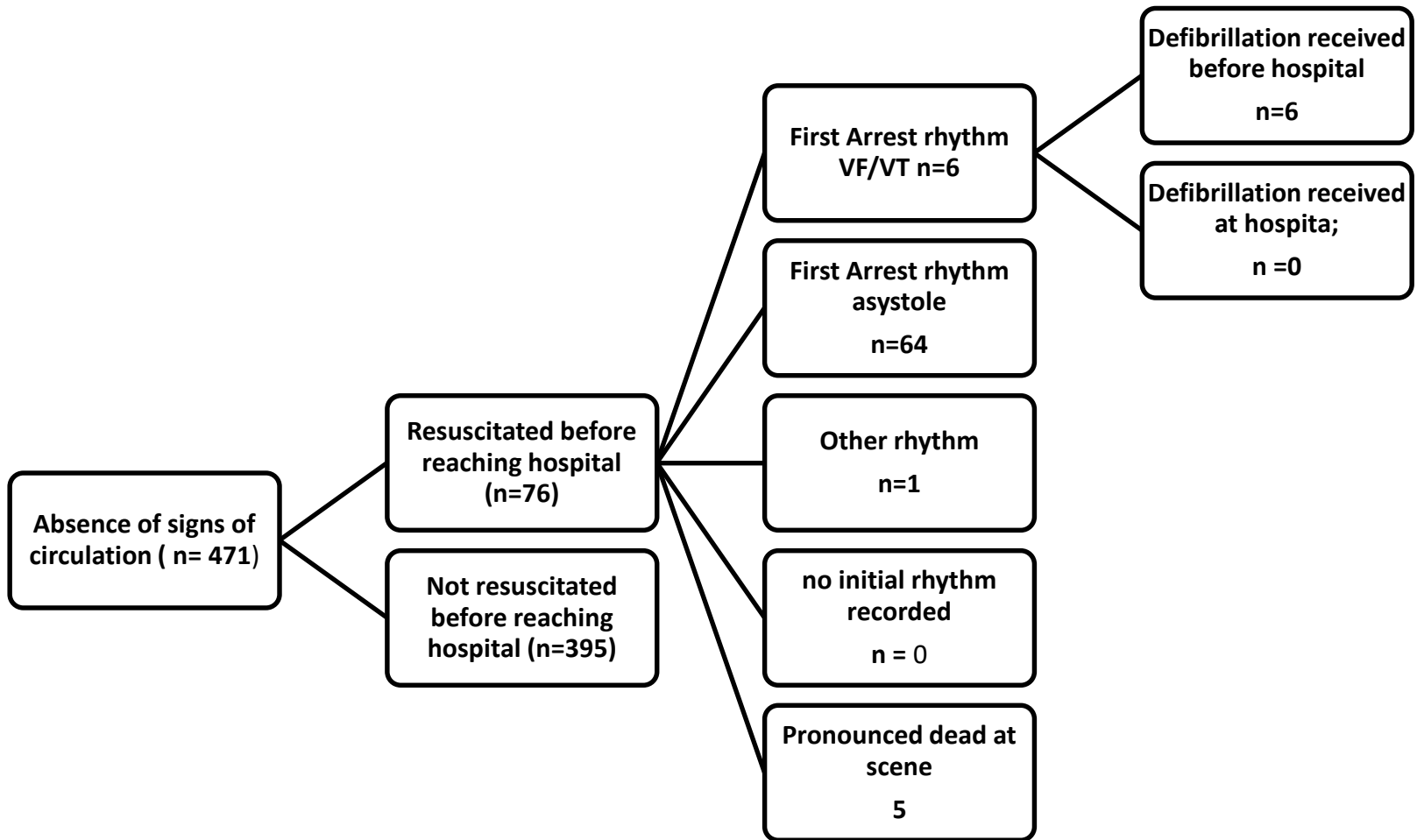
PAROS Network Establishment

- Pakistan become the part of PAROS in 2015
  - Based on 4 hospitals
    - Aga Khan University Hospital, Karachi
    - Tabba Heart Institute
    - Jinnah Post-graduate Medical Centre
    - Karachi Institute of Heart Disease
  - 1 EMS non-governmental charity organization
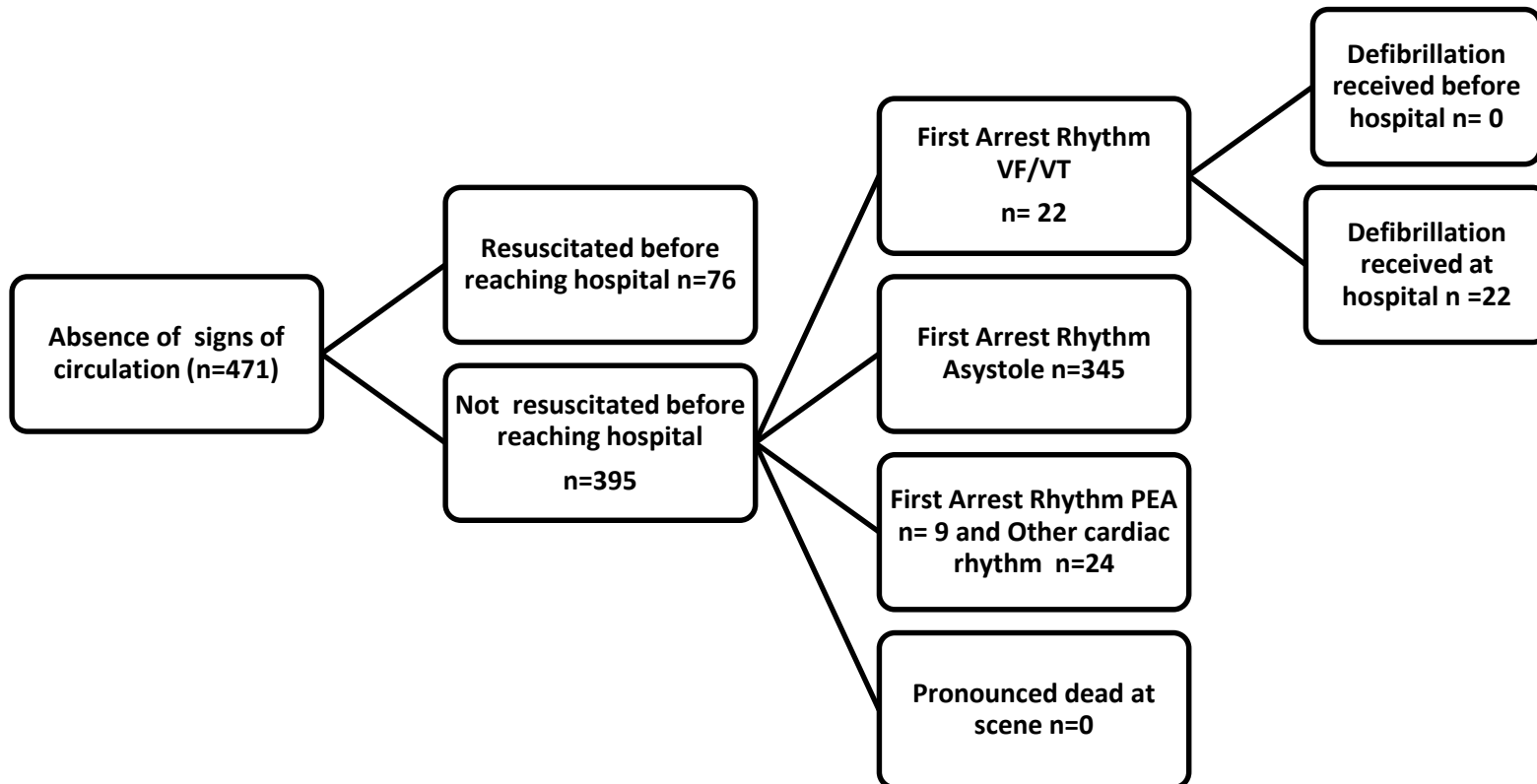   - Aman Ambulance

Results from Pakistan PAROS

- 471 Cases enrolled in Karachi , Pakistan From Sept 2015- Sept 2016

- Mean age was 53.8%

- Male 62.7% and female 37.7%

- Brought by EMS 35.6% and Non EMS 64%

- Survivors (n=5, 1%)

- Mean age of survivors 70

- Emergency CABG -1

- Emergency PCI 1

- Mean time to reach hospital 30 min

Utstein survival report of OHCA patients that received any resuscitation by ems or CPR before reaching hospital

Absence of signs of circulation (n= 471)

Resuscitated before reaching hospital (n=76)

Not resuscitated before reaching hospital (n=395)

First Arrest rhythm VF/VT n=6

First Arrest rhythm asystole n=64

Other rhythm n=1

no initial rhythm recorded n = 0

Pronounced dead at scene 5

Defibrillation received before hospital n=6

Defibrillation received at hospita; n =0

Utstein survival report of OHCA patients that did not receive any resuscitation before reaching hospital (includes patients conveyed by ambulance)

- Absence of signs of circulation (n=471)
  - Resuscitated before reaching hospital n=76
  - Not resuscitated before reaching hospital n=395
    - First Arrest Rhythm VF/VT n= 22
      - Defibrillation received before hospital n= 0
      - Defibrillation received at hospital n =22
    - First Arrest Rhythm Asystole n=345
    - First Arrest Rhythm PEA n= 9 and Other cardiac rhythm n=24
    - Pronounced dead at scene n=0

Quality of life of 5 OHCA survivors 30 day post arrest n=5

Visual analog scale for pain	score 70 = 3	Score 60 or below = 1	Score 50 = 1
Anxiety/Depression	No problem = 3	Moderate = 1	Severe = 1
Pain/ Discomfort	No problem = 2	Moderate = 3	Severe = 0
Mobility	No problem = 2	Some problem = 3	Unable = 0
Self care	No problem = 2	Some problem = 1	Unable = 2

Challenges

- Hospital staff was not trained
- Defibrillator was not available in the hospitals as we as in EMS.
- Delays in identifying the first rhythm
- ACLS protocol not followed regularly.
- Family/ bystandards had difficulty recalling when the patient become unresponsive.

Way Forward

- To assess the feasibility of providing CPR training in Karachi as a model for bystander CPR scenario in a developing country where central EMS organizations do not exist

- To further collect data on outcomes of out of hospital cardiac arrest patients in Karachi to increase the coverage of the database.

- To promote telephone CPR by training EMS organizations

- By using smart technologies to notify volunteer bystanders who can respond to nearby arrest to provide early CPR and defibrillation

Reference

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