Guidelines versus real practice Management of the STEMI patients in the Emergency Department in a regional hospital without PCI facilities

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Objectives:

STEMI pathology is still a common and have important implications on patients' life and on health care systems worldwide. Emergency County Hospital "St. Spiridon " is an university regional hospital and services more than 3.5 million population, but is a non- PCI center, the PCI lab being close but in another location, specialized only in cardio-vascular pathology. The study aims was to establish the following: time from presentation in a non-PCI hospital to PCI, time from presentation to first cardiology consult, admission of patients in Cardiology ward or transfer to PCI center and to audit the recommendation of 2017 STEMI guidelines in real world.

Method:

Statistical retrospective study was conducted on STEMI patients presented (self presentation or by ambulance with nurse) in the Emergency Department –of the Emergency County Hospital "St. Spiridon "-Iasi during 01 December 2017 – 22 May 2018.The data from ED files were analyzed using SPSS 25.0.

Results:

From the total of 64 STEMI patients in the ED of a non-PCI hospital, 42 of them were male (65.6%). The mean age of patients was 66,92 year, the youngest patient was 30-year-old and the older was 87-year-old. 53 patients were send to PCI center (82.8%) and 11 patients (17.2%) were admitted on Cardiology ward due to more than 12 h from the onset. Time involved to obtain a Cardiology consult and a final opinion after obtaining lab results necessary for 46 of those patients (71.9%) vary from 10 to 120 minutes, with a mean value of 37 minutes, for myocardial enzymes result of angio-CT for an Aortic dissection suspicion.

. A number of 18 patients (28.1%) were send directly to PCI center, without involving hospital cardiologist, after emergency physician decision. 35 of the patients (54,69%) were send to PCI center after cardiology consult.Time necessary to reach PCI center or to be admitted in Cardiology ward, beginning with presentation moment vary from 6 minutes up to a maximum of 360 minutes, and the mean time value is 102 minutes. 28.1% of the patients exceed the limit of 120 from first medical contact to PCI

Conclusions:

Most of the STEMI cases rich the PCI center from first, explaining the small number of cases that rich Emergency County Hospital "St. Spiridon ". We find that the most important factors that can influence the prolonged times for admission in PCI center is related to the need for additional investigations, such as the assessment of myocardial enzymes in dynamics (the most common situation), and the results from angio-CT to exclude aortic dissection. One third of the cases were routed by the emergency physician directly to PCI, without the involvement of the cardiologist of the hospital, after a prior telephone call to PCI center, these being the cases with the minimum waiting time.

Time for Cardiology consult									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Cardiology consult	46	10	120	36.93	25.001	1.436	.350	2.186	.688
Valid N (listwise)	46								

Time from presentation until admission on PCI or Cardiology									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Time	64	6	360	102.36	74.851	1.302	.299	1.906	.590
Valid N (listwise)	64