Transport times of acute STEMI patients treated at our PCI centre

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Introduction

Bajcsy-Zsilinszky Hospital

- July 2000- cardiovascular catheterization lab
- 2003- organized STEMI care system
- Jan 2010- Infarction Registry (IR)
  838 registered patients

territory (pop. ~ 432 000)

- Bp. Dist. X., XVII., XVIII.;
- Gödöllő and
- Nagykáta micro-regions

IR data reflects real life,
may serve as a quality control.

↕

ESC Guidelines on Acute STEMI Management (2008)

Aims

Focusing on pre-hospital management, the aims in our present study were to determine

- how much time it takes

from the first medical contact for an extra-territorial, acute STEMI patient to get to our PCI centre, considering

- the distance,
- whether they arrive from Budapest or the provinces, and
- the mode of transport.

Methods

Data was derived from the patients' health care documents and the Infarction Registry.

period examined – year 2011

patients excluded:

- coming from Budapest Dist. X., XVII., XVIII.,
- presenting after 12 hours (sub-acute MI) or
- with an ECG of LBBB.

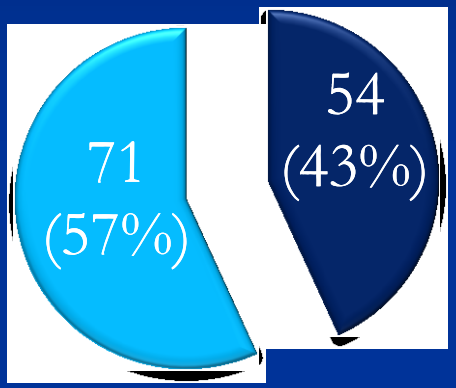
patients included → 2 groups – Budapest vs. the provinces

Times are given as median values.

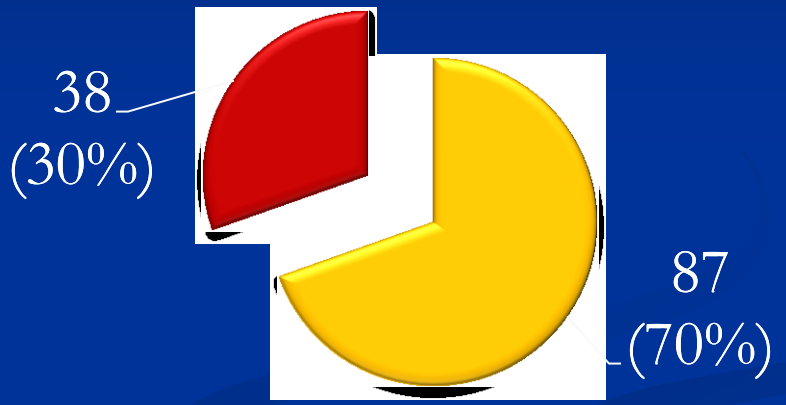
Results

- ∑ **125** patients included

Budapest vs. the provinces

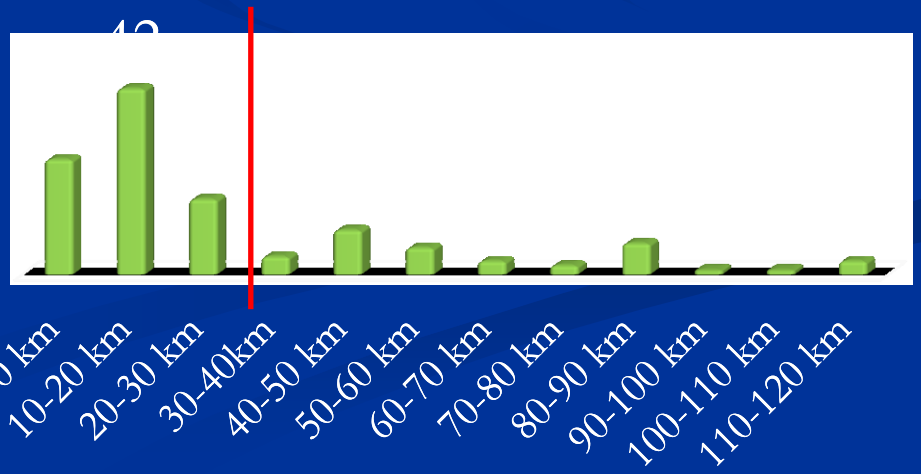


primary vs. secondary transport

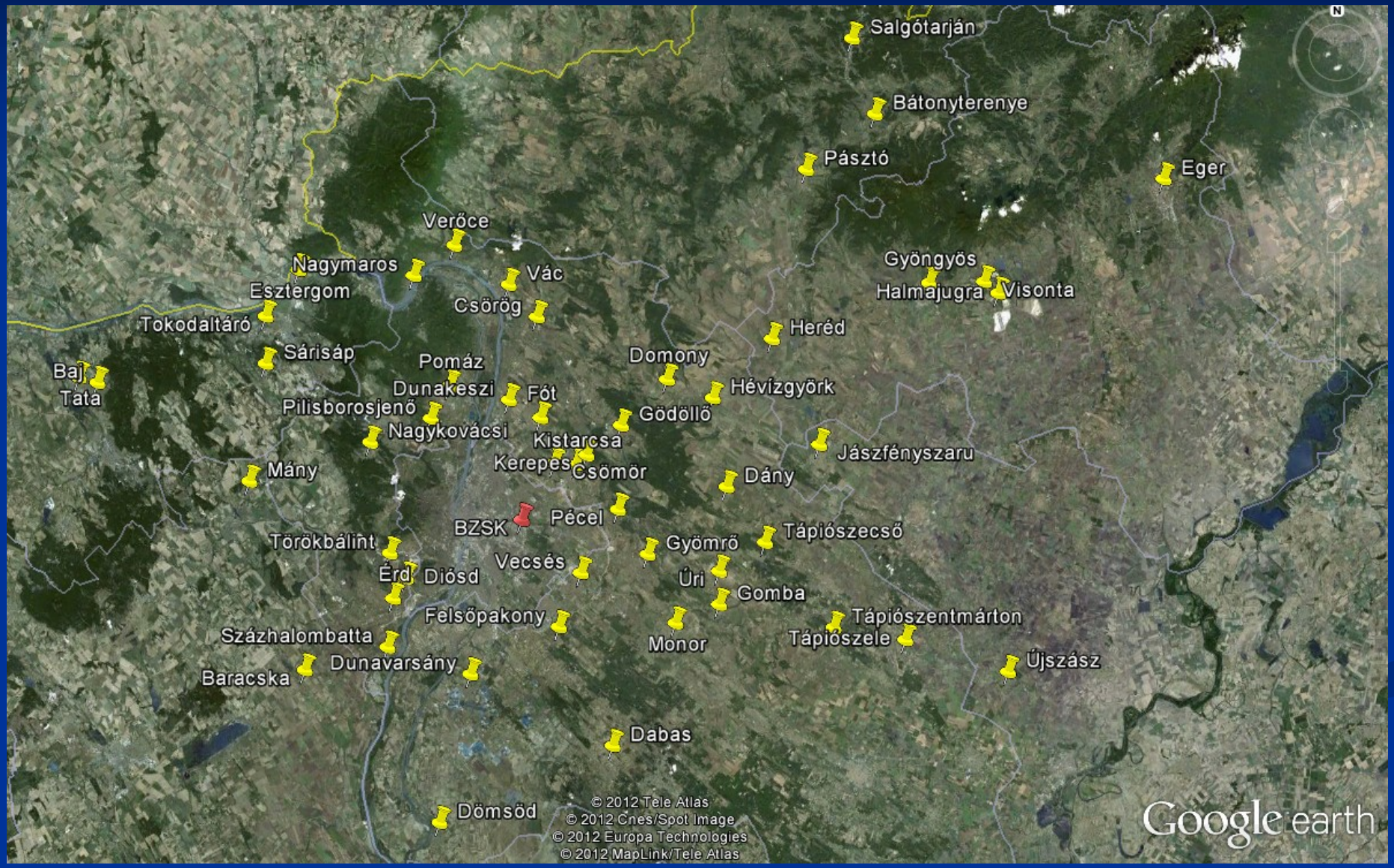


- average distance: **30** km
  - min. 4.1 km – Bp. Dist. XIX.
  - max. 117 km – Salgótarján

number of patients



On the Map


Salgótarján
Bátonyterenye
Pásztó
Eger
Verőce
Nagymaros
Vác
Esztergom
Csörög
Gyöngyös
Halmajugra
Visonta
Tokodaltáró
Heréd
Sárisáp
Pomáz
Domony
Baj
Tata
Dunakeszi
Fót
Hévízgyörk
Pilisborosjenő
Gödöllő
Nagykovácsi
Kistarcsa
Jászfényszaru
Kerepes
Csömör
Mány
Dány
BZSK
Pécel
Tápiószecső
Törökbálint
Gyömrő
Vecsés
Érd
Diósd
Úri
Gomba
Felsőpakony
Tápiószentmárton
Százhalombatta
Monor
Tápiószele
Dunavarsány
Újszász
Baracska
Dabas
Dömsöd
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Results

- time from first medical contact to PCI centre admission: **1*h*17*m***

	Budapest	the provinces
primary transport	**58*m***	**1*h*08*m***
secondary transport	**2*h*3*m***	**2*h*43*m***
when first medical contact in a hospital	**2*h*3*m***	**2*h*53*m***

- door-to-ballon time: **54*m*** (min. **28*m***)
  ← echocardiography, 3*m* from ICU to cath lab, patients' congestion
- **17** (**14%**) of the pts had a balloon angioplasty within 90 mins.

- **65** (**52%**) patients were contacted within 2 hours from the onset of the chest pain. Their median transport time was **1*h*11*m***. **6** (**9.2%**) of them had a balloon angioplasty within 90 minutes.

International publications

- Christoph Liebetrau Clin Res Cardiol (2011); 100:217-225 Direct admission versus transfer of AMI patients for primary PCI

  from first medical contact to admission with 1° transport: **64***m*

  2° **2***h***15***m*

  door-to-balloon time: **29***m* vs. ***31****m*

- Herrin J. Arch Intern Med (2011); 171:1879-1886 Suboptimal Transfer Times Reported for Most Patients Needing PCI

  door-in to door-out time: **68***m* (<30*m* is optimal)

  pharmaco-invasive therapy?!

- Michel R. Le May, M.D. N Engl J Med (2008); 358:231-240 A Citywide Protocol for Primary PCI in ST-Segment Elevation Myocardial Infarction

  ballon time – 1° vs. 2° transport: **69***m* vs. **2***h***3***m*

  better call for an ambulance rather than go to a hospital!

Conclusions

1.) Surprisingly, there was no real difference in primary transport times between the two groups (Budapest vs. the provinces).

2.) The first provider contacts the patient relatively early, however the duration of transport is long, especially in cases of secondary ones, therefore the time to reperfusion significantly expands.

3.) In the most important group of patients contacted within 2 hours (52%), the 90-min balloon-time, as indicated in the guidelines, cannot mostly be achieved (in only 9.2%), either.

Thank you for your attention!