

Revascularization for STEMI

Ken Maleady
Chest Pain / ED
Connolly Hospital





Aims & Objectives

- Review data from 3 years
- Pain to door
- Door to needle
- Door to balloon
- Audit re: waiting times
- Current issues in relation to delays treating STEMI

ACC/AHA Time Goals

- Door to ECG within 10 minutes
- Recommend fibrinolysis within 30 minutes of first medical contact.
- Primary PCI be provided within 90minutes of first medical contact.
- Primary PCI be provided off-site within 180 minutes of first medical contact.!!!



CHEST PAIN



TRIAGE



ECG REVIEW



RESUS



ED REGISTRAR/ CNS



CARDIOLOGY

(Liaise with PCI Centre)



Thrombolysis or Angioplasty

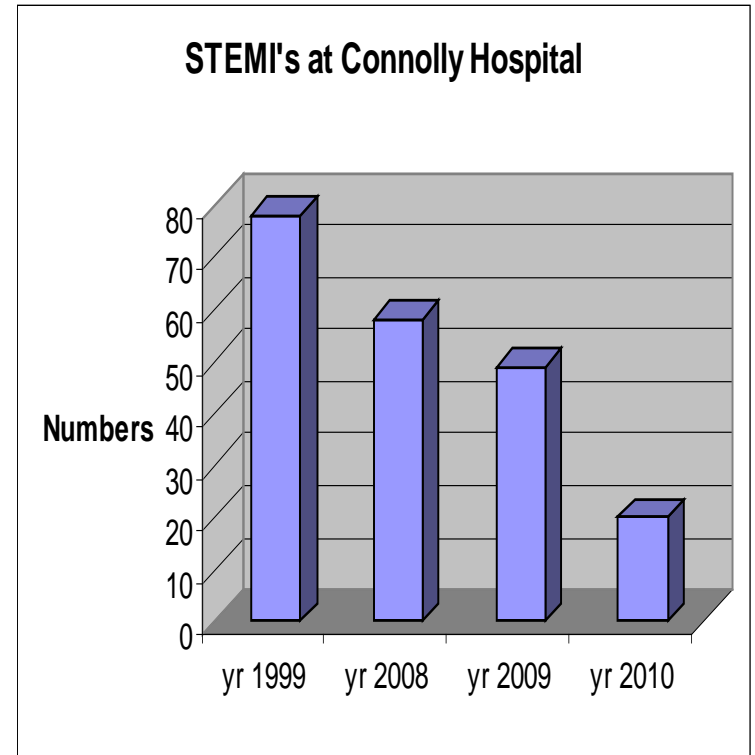
- Primary PCI yields greater outcomes and lower mortality than IHT at 30 days
- Thrombolysis remains the standard of care in most ED
- Primary PCI preferable if contraindicated to thrombolytic therapy
- PCI only performed in referral centers
- Thrombolysis can be performed in any hospital Emergency Department

Thrombolysis or Angioplasty

- Study of 26,205 consecutive STEMI patients in Sweden (Jama, 2006)
- Primary PCI had lower mortality than IHT at 30 days (4.9% vs 11.4% and 1 year 7.6% vs 15.9%)
- Primary PCI was also associated with shorter hospital stay and less re:infarction / risk of stroke than either PHT or IHT

STEMI Patients at Connolly Hospital

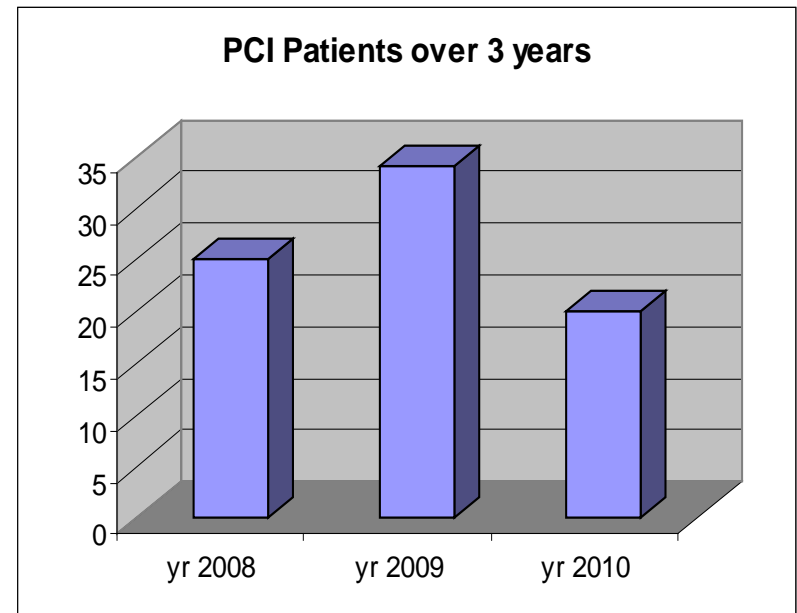
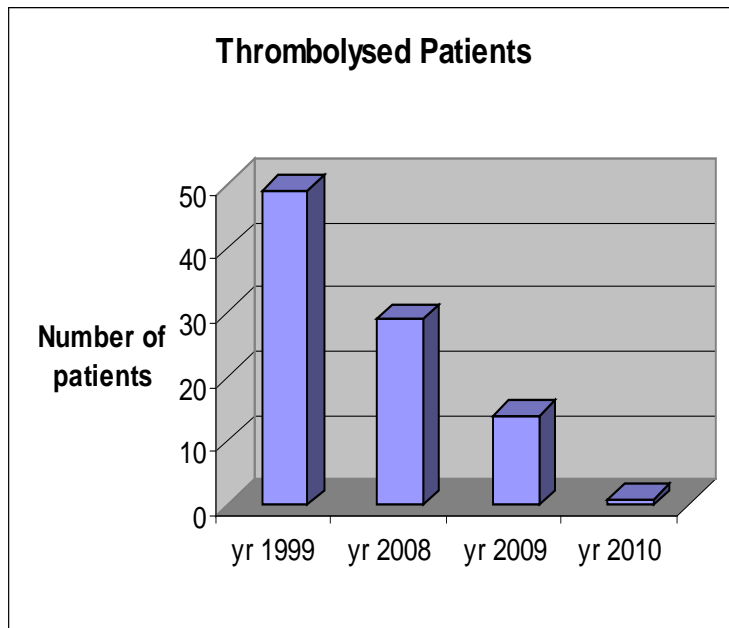
- 1999-78 patients
- 2008-58 Patients
- 2009-49 patients
- 2010- currently 20 patients to date



PCI versus Lysis

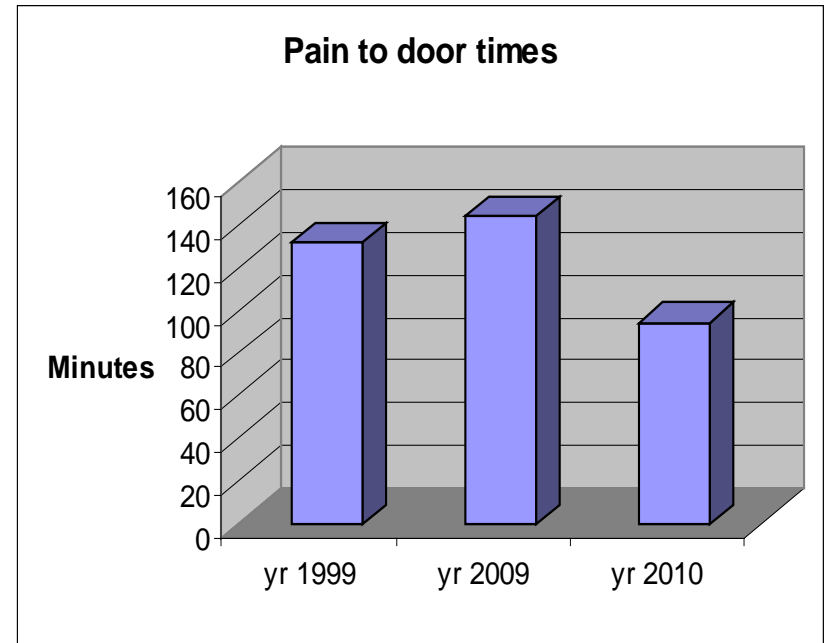
- 1999 – 49 Lysis
- 2008 – 29 Lysis / 25 PCI / 8 Rescue
- 2009 – 14 Lysis / 35 PCI / 3 Rescue
- 2010 – 1 Lysis / 20 PCI / No Rescue

PCI Versus Lysis



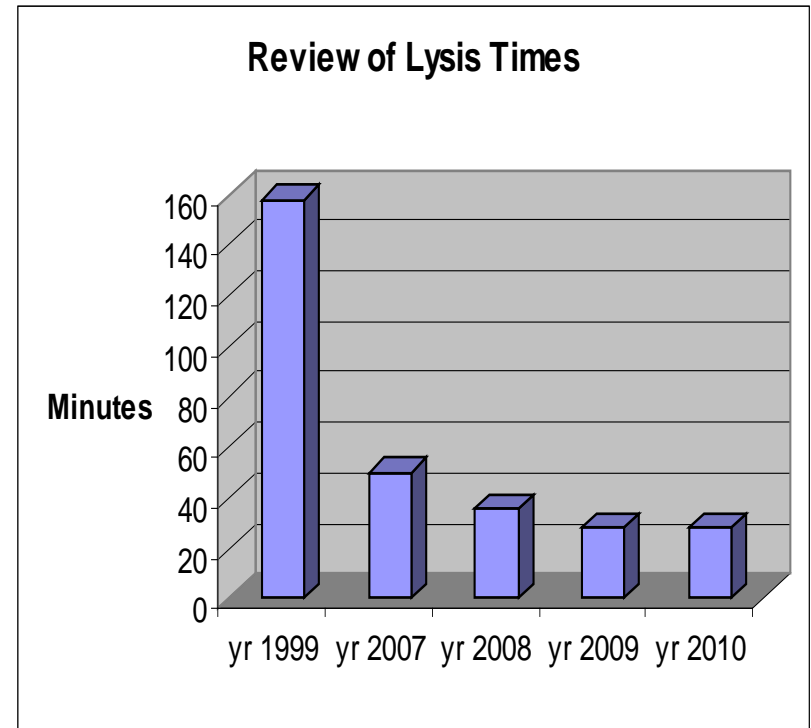
Average pain to door times

- 1999: 131.54 Minutes
- 2009: 143:56 Minutes
(Data available on 30 Patients)
- 2010: 94:01 Minutes
(Data available on 18 Patients)



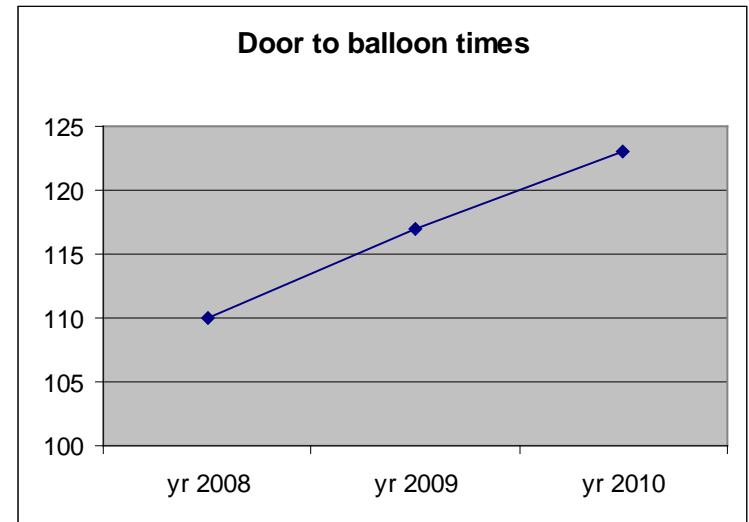
Average Door to needle Times

- 1999-158Minutes
- 2007-50 Minutes
- 2008-36 Minutes
- 2009-28 Minutes
- 2010-28 Minutes



Average Door to Balloon times

- 2008: 110: Minutes (Data available on 20 patients)
- 2009: 117:46 Minutes
- 2010: 123:15 Minutes





Delays Encountered-Audit

- Completed in the ED over 9 months (Dec 09 – Aug 2010)
- Time of Ambulance call until time of departure
- Average waiting time for Ambulance in ED: 28 Minutes 35 seconds
- Total number of transfers: 20



Delays Encountered

- Delay in contacting Cath Lab by Dr's on call.
- Delay in ambulance transfer from ED.
- ECG's not faxed by Ambulance personnel prior to arrival
- Delays while waiting in Cath Lab



Goal for STEMI patients

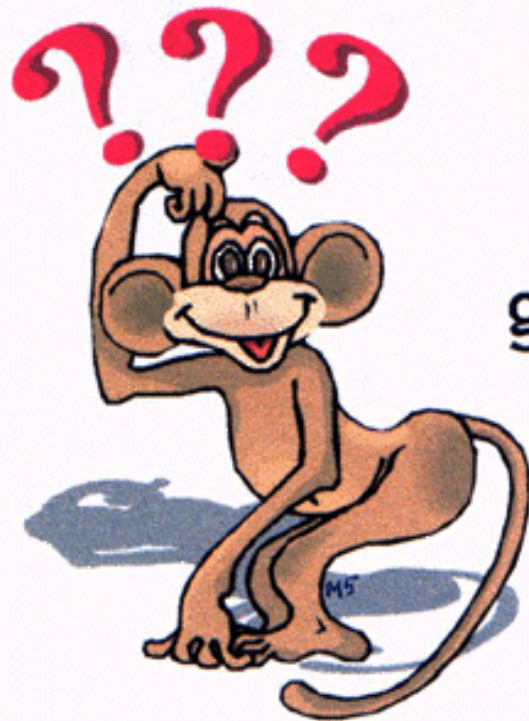
- To achieve AHA goals for door to balloon <90 minutes (Regardless of Off site or On site Cath lab?)
- Direct referral via Ambulance to Cath lab – is this realistic ?
- Not all patients attend ED via Amb. (61% compared with 39% who self present – data over 18 months)



Conclusion

- Pre-hospital Lysis-within 1-2 hours of onset of pain, unless contraindicated
- 90 minutes (Door to balloon) is a realistic target.
- Ambulance transfers are a challenge
- Lysis should be given when delayed transferring for PCI- >30 minutes
- Direct referral to PCI centres for STEMI patients, realistic and why not?
- PCI is better if fast, but the truth is that PCI is not done fast enough

Any questions?



Questions
are
guaranteed in
life;
Answers
aren't.