



ST elevation myocardial infarction (STEMI) : relationship between first medical contact (15/112/911) and first time chest pain was felt ? A prospective registry.



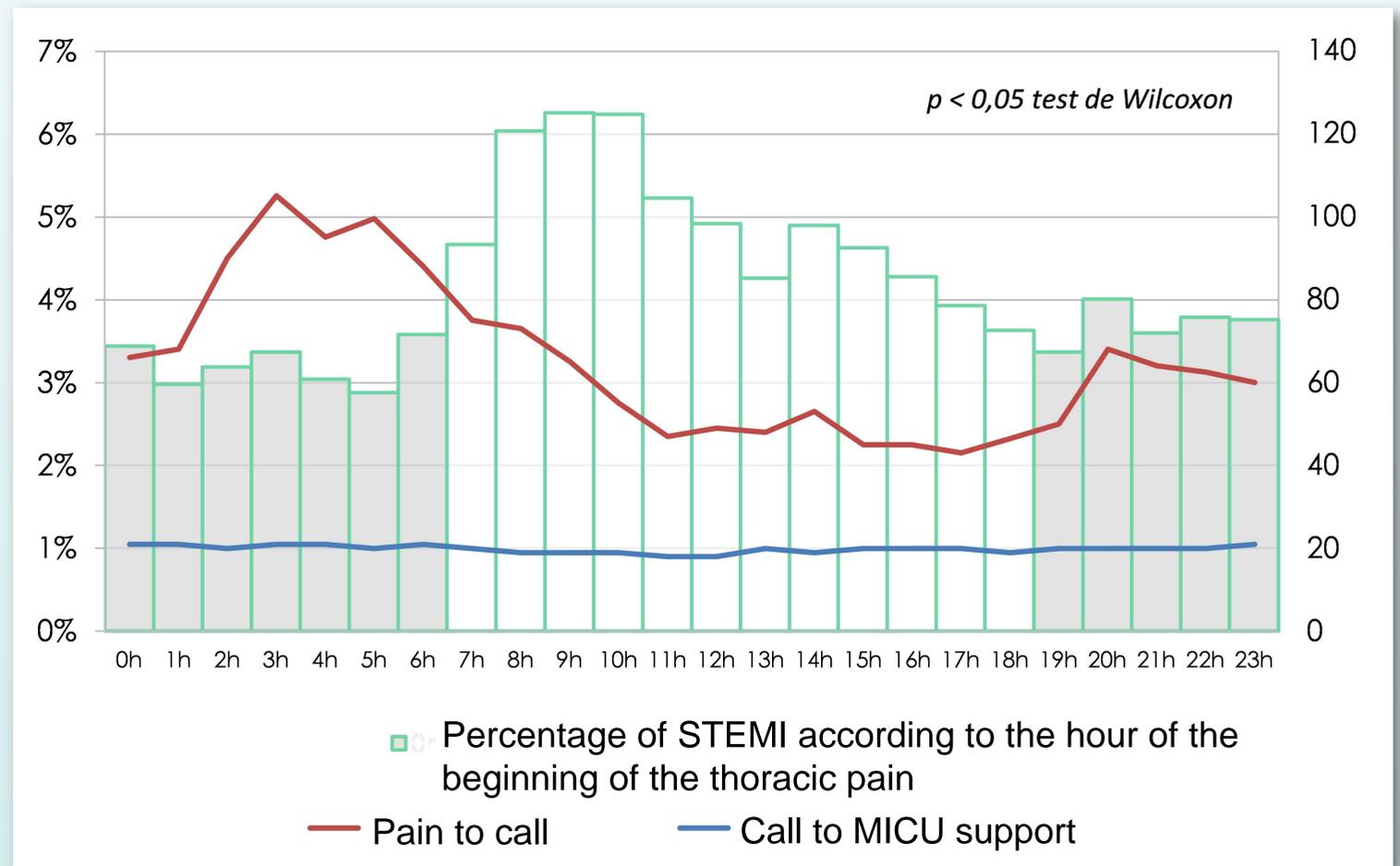
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Background and objective: *Time from symptom onset to first medical call (FMC)* is the first component of total ischemic time in ST elevation myocardial infarction (STEMI) patients, and **should therefore be as short as possible**. The aim of the present study was **to assess time to FMC in relation with timing of onset of pain**, in a large cohort of patients having called (15/112/911) the prehospital Emergency Medical Services (SAMU : Service d'Aide Médicale Urgente) dispatching.

Methods: The e-MUST registry was set-up by the regional health authority of the **greater Paris region** in France to prospectively collect data on **all STEMI** patients transferred by the physician-staffed mobile intensive care units (MICU) dispatched by the SAMU. The registry has been ongoing **since 2003 and all data up to 2013** were used for the present analysis, excluding only inter-hospital transferred patients.

Distribution of the number of STEMI according to the hour of the first symptoms and median deadline of call to the emergency medical service per hour



Results: Complete data on time of symptom onset and time to FMC were available in **17,789** patients. One third of STEMI cases occurred in the morning (from 6:00 am to 12:00 pm), with fewer occurring during the night (from 12:00 am to 6:00 am). Overall, median time from symptom onset to FMC was **60 [25;167] minutes**, with **considerable nyctohemeral variations** : the longest time to FMC was found during the night (88 [33;258] minutes) from 12:00 a.m. to 6:00 a.m., and the shortest in the afternoon from 12:00 p.m. to 6:00 p.m. (46 [19;123] minutes).

Discussion: Though fewer STEMI cases had their symptom onset during the night, but their time delay to FMC was much longer. Also, time to FMC in the morning hours, where a higher proportion of STEMI occurred, was longer than when STEMI occurred in the afternoon. **Media campaigns and public awareness should therefore specifically focus on reducing time delays** when an acute myocardial infarction occurs **at night or, to a lesser extent, in the morning**.

**Chest pain ?
Don't think, just call 15 !**