**ACUTE AORTIC DISEASES: TEMPORAL PATTERNS OF ONSET AND CLINICAL OUTCOME**

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Objectives: This lecture is aimed to review the available recent literature on this topic, and add new knowledge about the possibility that weekend (WE) admissions may be associated with higher mortality for patients with acute aortic diseases (AAD) compared with weekday (WD).

Background: A growing body of evidence has shown that hospital admissions on WE for several cardiovascular events, i.e., myocardial infarction, stroke, pulmonary embolism, and acute heart failure, are characterized by worst outcome.

Methods and Results: Based on the database of hospital admissions of the Emilia-Romagna region of Italy, we analyzed the discharge sheets of all patients with AAD (rupture or dissection) between January 1999 and December 2009, and calculated the risk of in-hospital death for patients admitted on WE compared with WD. The final sample consisted of 5012 events in 4541 subjects. AAD hospitalization was more frequent on Monday and less frequent on Sunday/Holiday (15.4% vs. 12.9%, p=0.001), and WD events accounted for 73.1% (n=3664). Admission on WE was associated with a significantly higher in-hospital mortality than WD admission (30.4% vs. 24.9%, p<0.001), and it was independent risk factor for higher mortality (OR 1.352, 95%CI 1.179-1.551, p<0.001).

Conclusions: These data provide further confirmation to previous studies demonstrating a higher in-hospital mortality also for AAD. On one hand, understaffing and limited availability of invasive procedures during WE may represent a plausible explanation. On the other, it is also possible that WE may be characterized by arrival of more severe cases to the hospital, as previously reported for myocardial infarction.