

# Weekend effects of admission and surgery in acute aortic syndrome

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## Abstract

**Background:** The weekend effect is a phenomenon characterized by increased early all-cause mortality among patients hospitalized or undergoing surgery over the weekend for emergencies. **Objectives:** With this meta-analysis we aimed to determine whether weekend hospitalization/surgery due to acute aortic syndromes (AAS) is associated with increased early all-cause mortality. **Methods:** Major electronic databases were searched for studies published up to October 2020 reporting early all-cause mortality rates for admissions/operations on weekends versus weekdays. Data were pooled using fixed- and random-effects models. The primary outcome of the study was early all-cause mortality after weekend versus weekday. **Results:** All the included studies were retrospective, comparative or cohort studies enrolling patients admitted or underwent surgery for AAS and reported early all-cause mortality after weekend (including holiday) versus weekday. A total of 18 studies including a total of 252807 patients were identified. This meta-analysis showed a significant increase in the early all-cause mortality for patients admitted/conducted surgery for AAS on weekends compare with weekdays (fixed-effect: OR 1.1;95% CI 1.06-1.14;P<0.00001). **Conclusion:** Weekend admission/surgery for AAS is associated with a increased risk of early all-cause mortality.

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