The acute aortic occlusion – single center results from a 14-year period
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ABSTRACT

Background: Acute aortic occlusion (AAO) represents a vascular emergency associated with high morbidity and mortality. Due to the rare event, there are only a few publications. The purpose was therefore to examine a consecutive series of patients in order to analyze our results and to look for prognostic variables.

Methods: 64 patients with the main diagnosis of acute aortic occlusion (ICD 740) were examined retrospectively (1/2004 – 12/2017). The primary endpoint was overall mortality during at 30 days and 6 months. Secondary endpoints were complications and amputation rates. Follow-up (FU) was carried out as outpatient examination or in form of telephone interviews.

Results: 45 patients (64 yrs., 59% male) were treated surgically (thrombectomy, thrombendarterectomy, extra-anatomic bypass procedures). In 17 patients a hybrid procedure with simultaneous PTAs/landing in 3 patients an endovascular therapy was performed respectively. Mortality rates were 25% and 41% after 30 days and 6 months. In 50% and in 30% surgical and systemic complications occurred respectively, 14% of all patients received an in-hospital major amputation. The multivariate analysis revealed that increased age (p = 0.005) and atrial fibrillation (A) (p = 0.01) were associated with a significantly higher mortality rates. In addition all systemic complications (pneumonia, cardiac, pulmonary) were independently associated with increased mortality.

Conclusions: Acute aortic occlusion remains to be an absolute vascular emergency with an in-hospital mortality rate of 25%. Mortality rates increase with age. AF and the occurrence of postoperative systemic complications. So far we were not able to detect any significant differences between the different treatment methods.

METHODS

• Retrospective single center analysis of 64 patients with an AAO (ICD 740).
• Primary endpoint: Overall mortality during FU.
• Secondary endpoints: revision and amputation free survival.
• Follow up: outpatient follow-up and phone interviews.

RESULTS

Overall-mortality rate: 50%
6-month mortality rate: 41%
In-hospital mortality rate: 25%
In-hospital amputation rate: 14%

Systemic complications:
• Surgical complications: 50%
• Infection: 16%
• Early complications: 17%
• Late complications: 17%
• Thrombosis: 14%

Tab. 1: Patients characteristics
Fig. 2: CT-A of AAO

Fig. 3: Surgical/Interventional techniques over time

Fig. 4: Kaplan Meier estimate survival: hybrid vs. open repair

CONCLUSION

• High in-hospital mortality of 25%
• Open surgery still the most common method, but endovascular procedures are gaining importance.
• Clinical outcome is influenced by: age, risk constellation, postoperative complications, acute limb ischemia stage.

DISCLOSURES

No conflicts of interest

Tab. 1: Outcome
Fig. 5: Stage distribution acute limb ischemia

Predictors for complications: