Introduction

Ischaemic stroke is still a main cause of invalidity and a third cause of mortality worldwide. Furthermore, inspite of detecting risk factors for stroke and succesfully treating many of them, incidence of stroke did not fall, it even increased in the last 20 years in young population. However, mortality from stroke decreased in the same period and the same is expected for morbidity in the next decade. The reason for this optimistic trends are new treatment options, especially after various methods of recanalisation therapy have been introduced. Although systemic thrombolysis with recombinant tissue plasminogen activator has been a first „thought out of the box“ and actually the first step in causal stroke treatment, the real revolution are thrombectomy techniques, finally approved worldwide in 2015.

In this presentation the results of main clinical studies considering stroke treatment are presented and discussed, focusing on unresolved issues and clinical dilemmas. Main problem in acute stroke treatment still remains time window as well as recanalisation versus revascularisation, therefore recent papers considering different opinions on this topic will be discussed as well. We will also present our own experience and results for acute stroke treatment in our patient cohort discussing some indication criteria which could be changing in the future.

Conclusion

Recanalisation stroke therapy is beyond any questions an entirely new era in stroke treatment and should be a main topic for any stroke team. Further investigations, clinical studies and observations are still needed to improve clinical outcomes as well as indication criteria making this therapy suitable for much larger number of patients suffering stroke.