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Plenary Highlights at ESOC 2023

The European Stroke Organisation (ESO) is delighted to be running the 9th ESO Conference (ESOC) 2023 on 24th – 26th May 2023 in Munich, Germany. This year, the meeting will be a full onsite event, with exciting opportunities for researchers, clinicians, and allied health professionals to present great science, share their enthusiasm and build new connections.

As a world leading forum for advances in research and clinical care of patients with cerebrovascular diseases, ESOC 2023 will present to you a packed, high quality scientific programme, including major clinical trials, state-of-the-art seminars, educational workshops, scientific communications of the latest research, and debates about current controversies.

Here are just some of the highly anticipated studies due to be covered at this year's conference:

Hyperacute care

Thrombectomy:

- *TESLA* (Thrombectomy for Emergent Salvage of Large Anterior Circulation Ischemic Stroke) and the *MAGNA* (Mechanical thrombectomy for larGe brain infArctions) collaboration will focus on looking at reperfusion therapy in patients with large core anterior circulation infarct.
- *VECTOR* (Adaptative Endovascular Strategy to the CloT MRI in Largeintracranial Vessel Occlusion) is a multi-centre trial particular of interest in patients with a susceptibility vessel sign on MRI. The trial will compare the current first-line strategy in endovascular treatment with stent retriever added to contact aspiration versus contact aspiration alone.
- *INDIVIDUATE* (Effect of Individualized Versus Standard Blood Pressure Management During Endovascular Stroke Treatment Under Procedural Sedation on Clinical Outcome) aims to compare an individualised blood pressure management approach in which intra-procedural blood pressure targets were set to pre-interventional values versus a standardised blood pressure approach.

- *PERFEQTOS* (Performance Feedback to Improve Time to Thrombectomy for Ischemic Stroke: a stepped wedge cluster randomized trial) evaluated if a performance feedback intervention reduced treatment delays in patients underlying endovascular treatment.
- *OPTIMAL-BP* focuses on another important aspect after successful thrombectomy. They investigated whether intensive blood pressure management (target systolic blood pressure <140mmHg) during the first 24 hours after successful recanalization vs. conventional management (targeting systolic blood pressure 140-180mmHg) improved functional outcome at 3 months.

Thrombolysis:

- *TIMELESS* is a phase-III, double-blind, randomised, placebo-controlled trial of tenecteplase in patients with acute ischaemic stroke and evidence of salvageable tissue on imaging who presented 4.5-24 hours after last seen well with an anterior circulation large vessel occlusion. The study aims to compare intravenous tenecteplase (0.25mg/kg) versus placebo in improving functional outcome at 90 days.

Other acute management:

- *PRECIOUS* (Prevention of Complications to Improve Outcome In Elderly Patients with Acute Stroke) focused on patients aged 66 years or older with ischaemic stroke or intracerebral haemorrhage and tested if preventive antiemetic, antibiotic or antipyretic therapy improved functional outcome if they were started within 24 hours after symptom onset and continued for 4 days or until discharge.
- *RESIST* (Remote Ischemic Conditioning In Patients with Acute Stroke) investigated if remote ischaemic conditioning started in the ambulance and continued in-hospital improved functional outcome in patients with acute ischemic or haemorrhagic stroke presenting within 4 hours.

Intracerebral haemorrhage & cerebral venous thrombosis

Improving management for patients with intracerebral haemorrhage (ICH) and those with cerebral venous thrombosis (CVT) is crucial given their known high mortality and morbidity.

- *INTERACT3* (The Third, Intensive Care Bundle With Blood Pressure Reduction in Acute Cerebral Hemorrhage Trial) is a large-scale pragmatic trial to assess the effectiveness of a goal-directed care bundle of active management vs. usual care. The active management arm included

intensive blood pressure lowering, glycaemic control, treatment of pyrexia and reversal of anticoagulation and is the first major trial to look at a holistic approach in managing ICH.

- *ENRICH* (Very Early Minimally Invasive Removal of Intracerebral Hemorrhage) aims to shed light on whether a minimally invasive surgical evacuation to remove ICH clot improves functional outcome compared to medical treatment alone.
- *SECRET* (Study of Rivaroxaban in Cerebral Venous Thrombosis) is a phase II feasibility trial comparing rivaroxaban to Vitamin K antagonist in patients with neuroimaging confirmed acute/sub-acute cerebral venous thrombosis.

Prevention

- Reducing recurrent vascular events and death is key after the acute phase and *SANO* (Structured Ambulatory Post-stroke Care Program) is a cluster-randomised controlled trial testing if a one-year behavioural, organisational and patient-centred intervention within a cross-sectoral multidisciplinary network reduced risks of recurrent stroke, myocardial infarction and death within 12 months after baseline assessment.
- With the increased prevalence of atrial fibrillation (AF), when to start anticoagulation with an AF-related acute ischaemic stroke remains an extremely relevant yet unanswered question in clinical practice. The *ELAN* trial (Early Versus Late Initiation of Direct Oral Anticoagulants in Post-ischaemic Stroke Patients with Atrial fibrillation) is an international effort testing the net benefit of early vs. late initiation of direct oral anticoagulants in such a patient group.
- Another area of great interest is cryptogenic strokes and the *ARCADIA* (Atrial cardiopathy and antithrombotic drugs in prevention after cryptogenic stroke) trial, which is the first trial of stroke prevention in atrial cardiopathy, will report if Apixaban was better than aspirin in preventing recurrent stroke in this condition.
- Primary prevention is another important aspect in reducing the overall burden of cerebrovascular disease. *UKPDS* (UK Prospective Diabetes Study) will report if more intensive blood pressure or glucose lowering in mid-life reduced incidence of stroke and dementia during follow-up for over 10 years.

Rehabilitation

- *RESTORE* (Ayurvedic Treatment in the Rehabilitation of Ischemic Stroke Patients in India) tested if the Ayurvedic rehabilitative treatment was superior to conventional physiotherapy in improving sensorimotor recovery in patients with ischaemic stroke.

Small vessel disease

- *Treat SVD* (Effects of Amlodipine and Other Blood Pressure Lowering Agents on Microvascular Function in Small Vessel Diseases) aims to answer whether antihypertensive drug classes differentially affects cerebral microvascular function in patients with symptomatic sporadic SVD or CADASIL.
- *LACI-2* (LACunar Intervention Trial-2) assessed if isosorbide mononitrate (ISMN) and/or cilostazol could improve post-lacunar stroke cognitive outcomes.

Carotid disease

- *ECST-2* (2nd European Carotid Surgery Trial) and *SONOBIRDIE* (SONOllysis in prevention of Brain InfaRctions During Internal carotid Endarterectomy) are two important trials to be presented to offer new insight into optimising management for patients with symptomatic or asymptomatic atherosclerotic carotid disease.
- *PRECISE-MR* is a phase II trial testing if antiplatelet therapy consisting of ticagrelor plus aspirin was superior to clopidogrel plus aspirin in preventing ischaemic brain lesions occurring during carotid artery stenting.
- *INSPIRES* (Immediate Intensive Statin Versus Delayed Intensive Statin for Patients with Acute Mild Ischemic stroke or TIA with Intracranial or Extracranial Atherosclerosis) will report if immediate intensive statin initiated within 72 hours of onset was better than intensive statin with a 3-day delay in reducing recurrent stroke at 90 days.

In addition to the above trials, please also stay tuned for our plenary session talk delivered by Christian Schulz on “*Planetary Health – Adaptation, Mitigation and Resilience in Health Care Systems*”.

There are many more excellent studies that will also be presented at ESOC 2023. Don't miss out and register now to attend ESOC 2023 in person.

We look forward to welcoming you to ESOC 2023 in May!