ESOC 2019

5th European Stroke Organisation Conference

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Media Release

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The 5th annual European Stroke Organisation Conference (ESOC) presents developments across the full spectrum of care – from acute intervention to robot-assisted rehabilitation and secondary prevention

- **RESTART:** Now clinicians can be reassured that antiplatelet drugs are safe after brain bleeds
- **RATULS:** Overall no direct effect of robot-assisted training, but 'clinically important' improvements in daily function
- **EXTEND, ECASS4-EXTEND and EPITHET:** We are now confident that clot-busters are beneficial up to 9 hours after stroke
- **ASTER2:** Combined methods were no better than the standard approach to pulling out blood clots in acute stroke

Additional information, including video interviews with principle investigators and summary slides are available on the ESOC 2019 Media Portal. Email your request for access to this password-protected to: ESCO@ESO-stroke.org.

The European Stroke Organisation Conference (ESOC) is now the largest stroke conference with twice the number of attendees at the 5th annual meeting than at its inaugural event in 2015. ESOC 2019 opened this morning with presentations from an extensive range of leading studies in stroke prevention, treatment and rehabilitation. Chair of the Conference Planning Group, Prof Jesse Dawson, welcomed delegates: "I believe the quantity of high quality research activity that we see today represents a noteworthy change in the field of stroke," he said. "Over recent years the dynamic at these conferences has shifted so that we now leave with information that truly changes or enhances clinical practice. I hope the delegates at ESOC 2019 are as inspired by the content being presented as I am."

Approximately 5,600 neurologists and other experts in the treatment and care of stroke patients, from 94 countries, will be attending symposia, poster presentations, workshops and networking activities throughout ESOC 2019. The opening plenary included presentations on the studies and results outlined below.

RATULS:
Robot Assisted Training for the Upper Limb After Stroke

Robot-assisted training could be a promising treatment for improving upper limb recovery following stroke. The RATULS trial is the largest trial to assess whether robot-assisted training improves upper limb function recovery after stroke. 770 participants enrolled from four study centres were randomly allocated to: i) robot-assisted training ii) enhanced upper limb therapy iii) standard NHS care.

Robot-assisted training did not significantly improve upper limb function at 3 months after stroke compared to the other two treatments, for the primary outcome, although there were some improvements on secondary outcomes. However, enhanced care improved the ability to carry out activities of daily living at 3 and 6 months.

Although RATULS had a neutral overall outcome, Principal Investigator Prof Helen Rodgers stated that robot-assisted training demonstrated a potential clinically-significant improvement in function. “There were statistically significant differences in a number of other factors, but none of these were clinically meaningful. However, the study has generated a lot of interesting information about the potential benefits of robot-assisted training.”

The research is published today in The Lancet.

Extending the thrombolytic time window using perfusion imaging selection – Meta-analysis of individual patient data from EXTEND, ECASS-4 and EPITHET

Endovascular treatment is indicated in patients with large vessel occlusion, but intravenous thrombolysis continues to be the mainstay of treatment for most patients with ischaemic stroke. However, thrombolysis is currently recommended only up to 4.5 hours after stroke onset.

This meta-analysis pooled individual data of 414 patients with acute ischaemic stroke who were imaged with perfusion-diffusion MRI or CT-perfusion and then randomised to treatment with alteplase or placebo after >4.5 hours after onset, or last time seen well, in RCTs testing intravenous thrombolysis versus placebo.

In the pooled analysis, alteplase improved functional outcomes at 3 months when administered 4.5-9 hours after onset or after waking-up with a stroke in patients with perfusion mismatch on imaging (OR 1.86, p=0.011). Although symptomatic intracerebral haemorrhage occurred more often in alteplase-treated patients (4.7% vs. 0.5%), mortality was not significantly different between groups (14% vs. 9%), and this did not negate the net benefit of treatment.

Professor Ma said, “Now is the time to change clinical practice to extend the thrombolysis time window to benefit more stroke patients globally. Importantly, benefit predominantly was seen in patients with automated perfusion mismatch.”

The research is published today in The Lancet.

ASTER2:

Combined use of contact aspiration and the stent retriever technique versus stent retriever alone for recanalization in acute cerebral infarction

Mechanical thrombectomy is the cornerstone of acute ischaemic stroke treatment in the subgroup of patients with large vessel occlusion and salvageable tissue. However, successful recanalisation is not achieved in all patients.

ASTER2 was the first head-to-head randomised controlled study directly comparing the combined use of contact aspiration (CA) and stent-retriever (SR) with stent-retriever alone on revascularisation rates in acute stroke patients receiving thrombectomy, with suspected anterior circulation ischaemic stroke secondary to large vessel occlusion and onset of symptoms <8 hours

250 patients were included in this multicentre open-label blinded study and the primary endpoint was the rate of perfect reperfusion (mTICI score 2c/3) at the end of the endovascular procedure.

The study's results showed that the rate of perfect recanalization was 65% with the combined approach and 58% in the stent retriever arm as a first line approach (p=0.17). There was also no significant difference regarding the first-pass effect. However, in the subgroup analysis, the combined strategy was associated with an increased rate of successful recanalization in patients with intracranial carotid occlusion or T occlusion.

Principal investigator, Professor Bertrand Lapergue, commented: "Perfect recanalization [TICI 2c/3] should be the target of endovascular treatment of ischaemic stroke. Further studies should address whether a specific clot location or type can benefit from a combined approach first line. Importantly, no safety concerns were observed during the trial."

RESTART:
Effects of Antiplatelet Therapy After Stroke due to Intracerebral Haemorrhage Effects of antiplatelet therapy after stroke due to intracerebral haemorrhage: Main results of the REstart or Stop Antithrombotics Randomised Trial

Patients who have suffered an acute bleed in the brain are at risk of both recurrent bleeds in the brain or ischaemic strokes due to blood clots. This trial sought to answer whether restarting antiplatelet drugs that reduce the chance of ischaemic strokes would make these patients more likely to suffer another bleed in the brain.

537 patients from 122 hospitals across the UK who had suffered a bleed in the brain whilst taking medications to stop blood clotting were randomised to either take antiplatelet medications or avoid these medications for 5 years.

The study showed that patients on antiplatelet medications actually experienced fewer bleeds in the brain than patients not receiving antiplatelets (12 vs 23 patients, HR 0.51, p=0.06) over an average of 2 years, suggesting that antiplatelet medications may actually reduce the risk of bleeds in the brain in this setting. Differences in all vascular events were reduced with antiplatelet therapy, as expected from previous studies (HR 0.65, p=0.025).

Principal Investigator, Prof Rustam Al-Shahi Salman said: "These findings are reassuring for clinicians. If there is any increased risk of brain haemorrhage it is not large enough to exceed the established benefits of antiplatelet therapy."

The research is published today in The Lancet.

Issued by the ESOC 2019 PR Committee

For more information or to schedule interviews, please send your request to: ESOC@ESO-stroke.org.