Norwegian Stroke in the Young Study II – NOR-SYS II

Methods

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Background

Compared with healthy controls at the same age, young patients with acute ischemic stroke have higher mortality, higher rates of new arterial clinical events, cognitive reduction, fatigue, depression and anxiety. Unvisible consequences, such as reduced cognitive function and fatigue are often first discovered when seemingly healthy patients start again in education or their working activities. Ischemic stroke at a young age demands high-quality resources for detailed investigation to detect the cause and consequences for best individual future prophylaxis and help.

Methods

NOR-SYS II, planned as a national prospective multi-center research program, is by date a single-centre program in Bergen, Norway. NOR-SYS II started 1st March 2016, with inclusion of patients at age 15 to 49 years with documented arterial, non-traumatic, ischemic stroke. Planned inclusion time is 5 years. The NOR-SYS II research program is based on NOR-SYS I.¹ A standardized questionnaire was further developed in collaboration with SECRETO (Searching for Explanations for Cryptogenic Stroke in the Young: Revealing the Etiology, Triggers, and Outcome), led by J. Putaala, Helsinki. NOR-SYS II has apart from cerebral CT, MRI, ECG, routine-blodtests and a biobank, a standardized ultrasound protocol with intima-media thickness measurements of carotid and femoral artery segments.

Further diagnostics in order to discover / reveal the cause of stroke are mainly done in collaboration with the Neuro-radiologic department and the Heart department (bubble test and trans-oesophageal echocardiography). At the same time diagnostics and evaluation for further rehabilitation are done. Registration of 24-hours blood pressure, arterial stiffness, testing of vision, hearing and neuropsychological testing are done after discharge.

Heart department
Transthoracic echocardiography
Transoesophageal echocardiography
ECG longtime-monitoring
CT- / MR heart
24-hours blood pressure
Arterial stiffness

Speech-language therapist
Speech-, language- and swallowing

Occupational therapist
ADL- and cognitive function

Physiotherapist
Physical function and balance

Eye department
Visual function and perimetry

Ear-Nose-Throat department
Hearing

Neuropsychological testing
Cognitive function

Telephone follow-up one week after discharge. Cinical follow-up 3 months and 1 year after discharge.

Conclusion

NOR-SYS II includes consecutively patients with documented acute cerebral infarction. Follow-up after 1 week, 3 months and 1 year and standardized diagnostics will lead to new knowledge about todays' risk factors, causes and consequences for best prophylaxis, rehabilitation and re-integration.

References

1. Fromm A, Thomassen L, Naess H, Meijer R, Eide GE, Kråkenes J, Vedeler CA, Gerdtts E, Larsen TH, Kuiper KK, Laxdal E, Russell D, Tatlisumak T, Waje-Andreassen U. The Norwegian Stroke in the Young Study (NOR-SYS): Rationale and design. BMC Neurol. 2013 Jul 17;13:89.