

HUB AND SPOKE: ORGANIZING MODEL IN THE INTRA-ARTERIAL TREATMENT OF ACUTE ISCHAEMIC STROKE. PRELIMINARY DATA OF LEGNANO HOSPITAL

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Introduction

Actually intravenous r-TPA thrombolysis is the gold standard treatment of ischaemic acute stroke. However a recent randomized clinical trial showed that combined intravenous + intra-arterial treatment until 6 hours after symptoms onset is safe and efficacious in treatment of stroke caused by proximal intracranial arterial occlusion: increase of 13.5% in patients without severe disability at 3 months (mRS 1-2). Sanitary organization is important to reach these results: it's necessary a tight cooperation between peripheral hospital and interventional neuroradiology. We described organizing processes used in Legnano Hospital in the intra-arterial treatment of ischaemic stroke

Method

If there is a suspected stroke, the 118 alerts DEA; when patient is in the hospital, already in the triage, he follows a preferential route: rapid evaluation of patient by internist, implementation of blood exams, EKG, cerebral CT Scan and neurological examination .

At the end of exams there are different possibilities:

- intravenous thrombolysis: patient is transferred in Stroke Unit and treated with r-TPA
- contraindication to intravenous thrombolysis: it's considered intra-arterial approach
- suspected thrombosis of cerebral major artery: implementation of angio-CT Scan and starting of intravenous thrombolysis with r-TPA at full dosage. If arterial occlusion is confirmed, the patient is transferred with naesthesiological assistance to interventional neuroradiology (dedicated telephone number available) of Niguarda Hospital where endovascular treatment will be done.

At the end of treatment patient comes back in Stroke Unit of Legnano Hospital

Results

In the last year 6 patients (4 male, 2 female) are submitted to intra-arterial treatment: the mean age was 55years; 2 patients were treated within 2.5 hours; 4 between 3 to 5 hours since clinical onset . 3 patients had occlusion of MCA, 1 patients occlusion of ICA with distal embolization, 1 patient dissection of ICA with embolization in the MCA and 1 patient occlusion of BA.

1 patient recovered completely (mRs 1), 2 patients had a good outcome (mRs 2), 3 patients had partial recovery (mRs 3).

No adverse events related to procedure

Conclusions

Endovascular treatment of acute ischaemic stroke need specialized team and complexes clinical asset, not always available in all hospital. In "Hub and Spoke" organizing model, endovascular approach can be used by peripheral hospitals too.

The most complicated procedures done in high skilled Centre optimized clinical cares and reduced risks and costs
There are some critical points: necessity to act quickly, transport organization and immediate availability of anaesthesiological assistance.

Bibliografia

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