**Introduction:** A new flexible micro filament device for intracranial thrombectomy, the phenox Cbt Retriever (pCR) has become available for use in patients suffering from ischemic stroke in Europe since October 2006. So far, over 130 applications have been registered in 13 centers throughout Germany and France. More than half of these patients were treated in three centers alone (Munich, Stuttgart, and Saarbrücken). The analysis of outcome and recanalisation rates presented here is based on a subset analysis of 60 vascular territories applications in 55 patients performed in three centers in 2007.

The **phenox Cbt Retriever - pCR**

**Patients:** 60 vascular territories were treated in 55 patients, 31 male (av. 63 yo) and 24 female (av. 69 yo). The most common source of thrombembol was cardiogenic, followed by artero-arterial (e.g. carotid stenosis), hypercoagulative state and iatrogenic after carotid stenting or aneurysm coil occlusion. The average NIHSS pre/post treatment was 15/9 within 48 h

**Target vessels** (mult. possible)
- ICA: 11
- BA: 15
- MCA: 35 (20 incl. M2 – M4)
- ACA: 4
- PCA: 6

**Recanalisation** was achieved in 46/54 pts=85% (missing data: 1)

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<tr>
<th>TICI 3: 32</th>
<th>TICI 2: 12</th>
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<td>68%</td>
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A combination of pCR and local intraarterial fibrinolysis (rTPA) was performed in 38/54 patients and led to a **recanalisation rate of 30/38 = 79%**

**Adverse events:** There were no device related adverse events that had clinical sequelae. Among the entire registry (130 pts) two detachments were recorded and attributed to vasospasm. In both cases the pCR could successfully be retrieved by means of a microwire. Two early failed attempts were due to extracorporeal kinking of the application wire that is reinforced by the manufacturer in the current version. There were 2 microguidewire perforations in thrombus loaded segments: One M2/3 branch perforation was occluded with coils, the patients had a full clinical recovery. One acom perforation occurred during a salvage attempt to establish flow in an acute bilateral ICA T-oclusion past 6h of onset.

**Angio-to-Reperfusion-time** 20-160 minutes. **Average = 71 minutes**

**Dual device application:** Performed in 12 cases – CE mark since 12/2007

Two possibilities:
1. Parallel application in larger diameter vessels
2. Y-technique in bifurcations

**Conclusions:** The initial assumption that the pCR is relativelyatraumatic was substantiated by the absence of device related adverse events in our series.

The overall recanalisation rate with distal reperfusion in 68% is satisfactory.

Especially the combination of LIF and pCR yielded good results approaching 80% distal reperfusion.

The Y-technique was particularly effective in cases of basilar tip occlusion.

One third of all target vessels had a diameter of 2mm or less; in some cases even distal segments could be reached and recanalised without difficulty.

**Example case**: Angio-to-reperfusion = 28 minutes

41 yo male, progressing loss of consciousness, comatose on arrival, systemic rTPA: no effect. LVA injection showed mid basilar occlusion, sequential passage of the thrombus with a SilverSpeed 16 wire, Rebar 27 catheter and simultaneous application of two kissing 2-4-20 pCRs. Simultaneous retrieval with aspiration on guider led to complete recanalisation (TICI III).

DWI-MRI 24h post proc.: Small pontine and thalamic lesions. Asymptomatic patient, no neurologic deficit.