poral, palpebral, labial, nasal, submental, occipital, postauricular, infraorbital and buccal regions. Ultrasonography has shown a lesion with regular or irregular contours, heterogeneous structure with high and low echogenic sites. MDCT-angiography allowed to define size and depth of the lesion, vessel diameter, bone tissue involvement and participation of intracranial vessels in blood supply of the AVM. Combined treatment was performed in 17 cases (including embolization with surgical removal of AVM in 16 cases and electrochemical lysis and surgical removal of AVM in 1 case), and combined treatment was performed in 7 cases.

Conclusions. Complementary diagnostic tools allow determining different parameters of AVMs that are necessary for treatment planning. Combined use of ultrasonography and 3D MSCTA provided precise treatment planning and helped to obtain good results.

TRACTOGRAPHY OF THE BASAL GANGLIA IN PATIENTS WITH ALZHEIMER'S DISEASE

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Key words: *alzheimer's disease, basal ganglia, tractography*

Background. Although there are many studies of Alzheimer's disease (AD) focused on temporal and cortical atrophy, basal ganglia have received only little attention.

Aim. Our aim was to visualise neural tracts of the basal ganglia and measure their parameters in patients with AD and healthy controls.

Material and Methods. 10 patients with AD and 10 healthy controls underwent MRI. Neural tracts were reconstructed in caudate, putamen and pallidum using DSI Studio Following parameters were obtained: number of tracts (NT), tract length (TL), tract volume (TV), generalized fractional anisotropy (GFA) and normalized quantitative anisotropy (NQA). Results were analysed using Statistica 10.0 software.

Results and Discussion. Based on statistical analysis we obtained following statistically significant ($p<0.05$) results. There was seen decrease of NT in right caudate in patients with AD. On the contrary, in right and left putamen was observed an increase in NT and NQA in patients with AD. Similarly, in left pallidum was observed an increase of NQA and in right pallidum an increase of NT and NQA in patients with AD.

Conclusions. Increase of NQA represents higher density of neural tracts in putamen and pallidum in patients with AD suggesting a compensatory mechanism.

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RELATION BETWEEN THE GROWTH OF 0–18 MONTH-OLD INFANTS AND BMI OF THEIR MOTHERS

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Key words: *growth, breastfeeding, BMI, weight-for-age, weight-for-length*

Background. Overweight and obesity belong to major civilisation diseases in developed countries. Their impact is recorded not only for mothers (loss of breastfeeding, especially after 4–6 months after delivery) but also on the child growth and development (hypertension, dyslipidemia or high birth weight). This situation is also triggered by family environment.

Aim. Our study compared basic anthropometric parameters of children until 18 months of age with percentile growth charts of Czech population.

Material and Methods. Data of 1765 children and their mothers collected in 2009–2010 were used for the study. The children were divided according to BMI categories of mothers. Software RustCZ based on the Czech growth charts was used for finding the percentile values of length-for-age, weight-for-age, weight-for-length and BMI-for-age for all measurements of every child at all monitored ages. Reference data are results of the 5th and 6th Nationwide Anthropological Survey (1991 and 2001).

Results and Discussion. Studied group composed of 7.6% obese mothers, 9 of whom had BMI above 40 kg/m^2. Full breastfeeding at the maternity hospital discharge was present in 90% of normal BMI mothers (average time 8.5 months) but only in 76%