

NEUROSURGERY OUTCOME IN PATIENTS WITH CUSHING'S DISEASE WITH AND WITHOUT VISUALIZED PITUITARY ADENOMA ON MRI, WHO UNDERWENT INFERIOR PETROSAL SINUS SAMPLING

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Objective: to estimate the outcome of neurosurgery in patients with Cushing's disease (CD) with and without pituitary adenoma visualization on MRI



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Material and methods:

Patients with confirmed CD (11.2008-11.2014) by both inferior petrosal sinus sampling (IPSS) and histological evaluation after neurosurgery were enrolled into the study. Subjects were referred for IPSS because of non-visualized pituitary adenoma or contradictory results of non-invasive tests. Remission of Cushing's disease was confirmed in the event of development of adrenal insufficiency or normalization of serum cortisol and 24 hour urinary free cortisol (24hUFC) levels along with clinical remission at least during 3-6 months after neurosurgery. MRI was performed using Siemens Magnetom Harmony 1.0T.

Results:

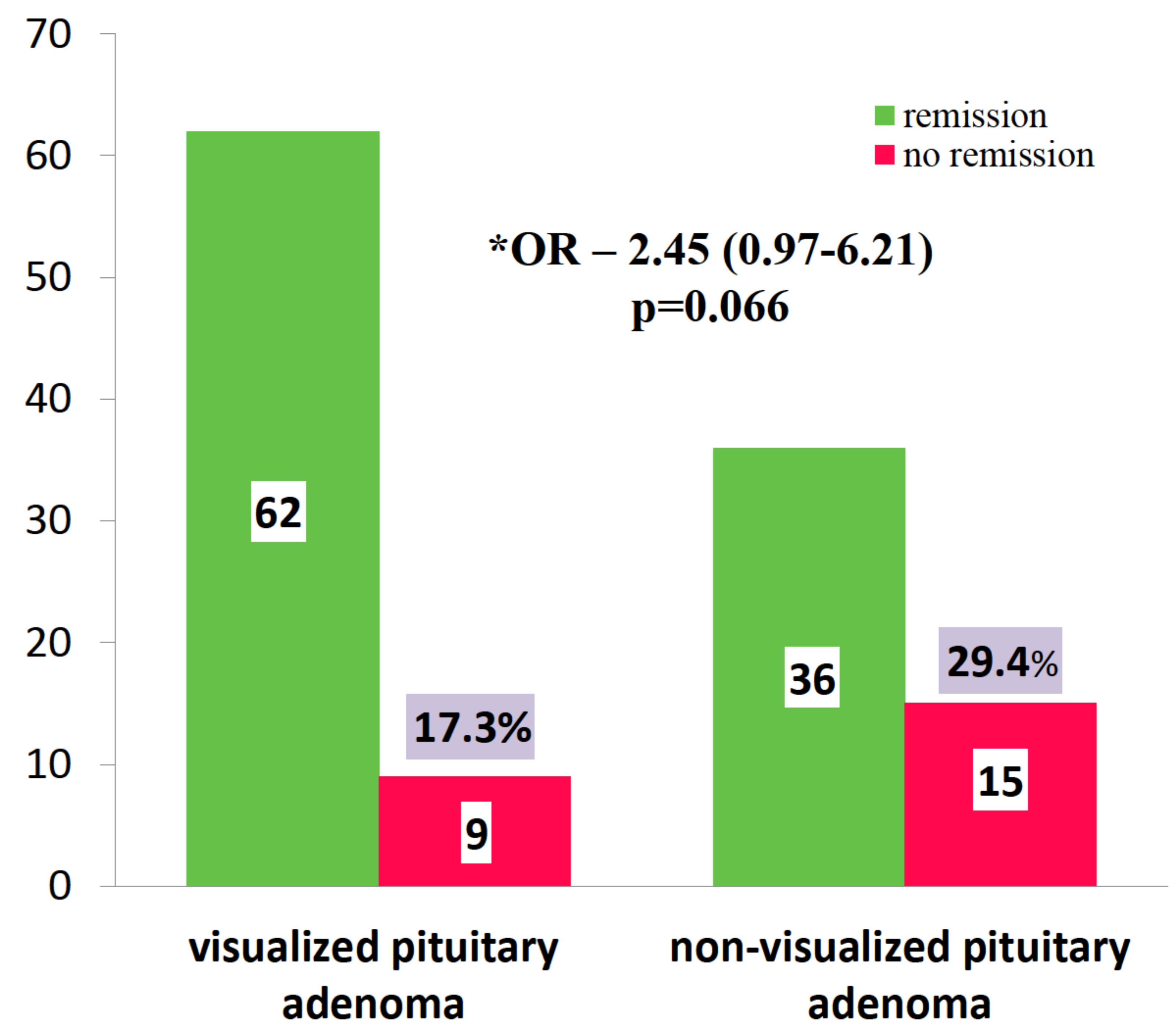
A 113 (88 female) consecutive patients with CD confirmed by IPSS were enrolled. Median of age (Q25-Q75) – 36 (27-50) years old; 24hUFC – 1903 (922-4219) nmol/24h; ACTH – 89,5 (60-135) pg/ml. In 51 cases pituitary adenoma was not visualized on MRI with gadolinium, 33 subjects were referred for IPSS because of adenoma ≤ 6 mm, 29 patients underwent IPSS due to negative for CD non-invasive tests.

After the first neurosurgery remission was not achieved in 15 (29.4%) patients out of 62 patients with visualized pituitary adenoma on MRI; and in 9 (17,3%) cases out of 51 patients with non-visualized pituitary adenoma on MRI; $p = 0.066$ OR- 2,45 (0,97-6.21)

BASELINE CHARACTERISTICS OF PARTICIPANTS

CHARACTERISTIC	WITHOUT VISUALIZED ADENOMA	WITH VISUALIZED ADENOMA	P
	Mean (95% confidence interval)		
N	51	62	
Age	38(34-43)	37(34-40)	0.35
Sex M (%):F (%)	14(27.5%):37(72.5%)	11(17.7%):51(82.3%)	0.156
24hUFC	2307(1626-2988)	3297(2593-4001)	0.05
ACTH 9.00	82.0(69.4-94.5)	114.2(99.9-128.6)	0.001
ACTH 23.00	73.7(51.2-96.2)	98.7(82.6-114.8)	0.066

REMISSION RATE AFTER NEUROSURGERY IN PATIENTS WITH CD WITH AND WITHOUT PITUITARY ADENOMA VISUALIZATION ON MRI



CONCLUSION: remission rate after neurosurgery does not statistically significant differ between patients with CD with non-visualized pituitary adenoma on MRI and other patients with CD initially referred for IPSS.

