Evaulation of Remission Rates of Growth Hormone Secreting Adenomas According to 2010 Consensus Criteria

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Introduction

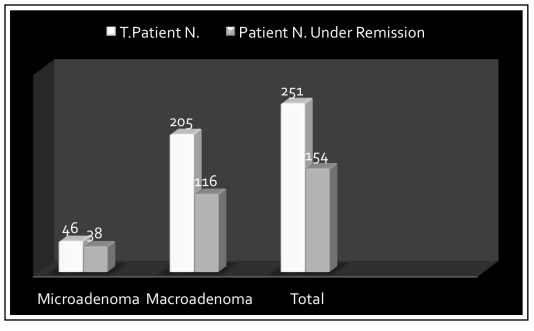
Remission rates for GH-secreting pituitary adenomas changed as random GH<1 ng/ml, GH<0.4 ng/ml under oral glucose tolerance test and normal IGF -1 values according to 2010 criteria.According to 2014 criteria, it is suggested using a random GH<1 ng/ml as a therapeutic goal, as this correlates with control of acromegaly.

In this study we compared our results according 2010 concensus criteria that were operated on by Endoscopic Endonasal Transsphenoidal (ETS) Approach.

Methods

251 patients with GH secreting adenomas were operated on by ETS approach between the years of 1997 (September) – 2015 (March) in the department of Neurosurgery, Kocaeli University. We have performed 276 operations for those patients.

In first early (lack of experienced period) group with 49 (7 microadenomas and 42 macroadenomas) patients, we did not perform extrapseudocapsular dissection, however in the second late group with 202 (39 microadenomas and 163 macroadenomas) patients we have performed extrapseudocapsular dissection



Results

251 patients were included in the study, 133 (53%) were female and 118(47%) were male. Age ranged between 18 -72 years old. There were 46 microadenomas and 205 macroadenomas according to preoperative MRI findings.

According to 2010 criteria, overall remission was achieved in 154 (%61.35)patients.

In the first group, remission was achieved in 85.7% of patients (6/7) for microadenomas and in 23.80% of patients (10/42) for macroadenomas and in 32.65% of patients (16/49) for total.

In the second capsular dissection group, remission was achieved in 82 % of patients (32/39) for microadenomas and in 65.3% of patients (106/163) for macroadenomas and in 68.3% of patients (138/202) for total.

There were 59 (%23.50) patients with Knosp 3-4 cavernous sinus invasion.Remission was achieved in 20 (%33.9) patients according to 2010 criteria.

Conclusions

Surgical removal of GH adenomas is a sweeping and capsular dissection technique that enables total removal of the lesions.Endoscopic technique has the advantage of detailed imaging that allows to reach anterior and superolateral recesses especially in cases with cavernous sinus invasion.Endoscopic technique provides extrapseudocapsular dissection that allows higher remission rates.

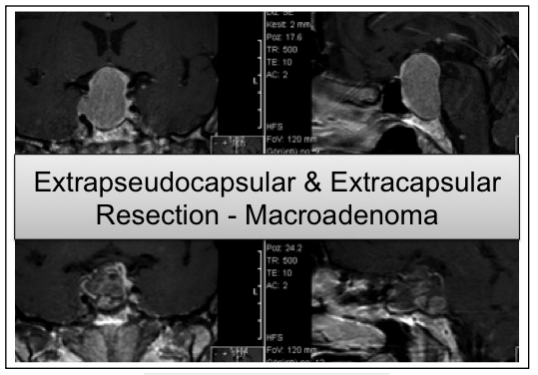
Learning Objectives

Endoscopic technique provides extrapseudocapsular dissection that allows higher remission rates.

References

	N	R.All (%)	R.Micro (%)	R.Macro (%)
Microscopic Series				
• Kim et al 2009[a]	42	64	67	60
• Ludecke - Abe 2006		72	95	68
• Trepp et al 2005[a]	69	42	80	39
• Nomikos et al 2005[a]	506	57	75	50
• Esposito et al 2004[a]	67	57	77	52
• De et al 2003[a]	90	63	79	56
• Beauregard et al 2003[a]	103	52	82	47
• Kaltas et al 2001[a]	67	34	59	26
• Shimon et al 2001	88	74	84	64
• Kreutzer et al 2001[a]	57	70		
Endoscopic Series	N	R.All (%)	R.Micro (%)	R.Macro (%)
• Shin et al 2012[b]	51	51	83	46
• Wang et al 2012[b]	43	67	77	63-67
• Jane Jr. et al 2011[b]	60	70	100	61
• Hofstetter et al 2010[b]	24	38		
• Gondim et al 2010[a]	67	75	86	72
• Campbell et al 2010[a]	26	58	75	55
• Yano et al 2009[a]	31	71		
• Dehdashti et al 2008[a]	34	71	83	65
• Frank et al 2006	83	70	83	65
• Kabil et al 2005	48	85	100	80
• Cappabianca et al 2002[a]	36	64	83	60
• Cappabianca et al 2002[a]	23	57	67	55

[a] 2000 concensus criteria (normal IGF-1, GH <2,5 ng/ml, OGTT GH<1 ng/ml)
[b] 2010 concensus criteria (normal IGF-1, GH<1, OGTT'de GH<0,4 ng/ml)



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