



RELATIONSHIP BETWEEN ADENOID VEGETATION AND NEUROSECRETORY DYSFUNCTION (PITUITARY DYSFUNCTION)

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Introduction and objective: The role of enlarged adenoid tissue has been long discussed in terms of causes leading obstructive sleep apnea. Sleep disorders in children with adenoid vegetation impair quality and duration of REM (Rapid Eye Movement) sleep where growth hormone secretion is higher (1,2). We also thought that cortisol that displays a circadian rhythm might be also affected by sleep disorders. Sleep profile test is widely used to demonstrate neurosecretory dysfunction of growth hormone. For this purpose, we planned to determine presence of neurosecretory dysfunction, time and level of cortisol peak in the morning in children with adenoid vegetation.

Material and method

Patients with indication for surgery were identified by measuring grade of adenoid vegetation via flexible fiberoptic endoscope among patients who presented to ETN outpatient clinic of Yüzüncü Yıl University, Medicine School. The study was approved by Institutional Ethics Committee and all parents gave informed consent before admission to pediatrics department. Blood samples were drawn by 20-minutes intervals after onset of deep sleep for growth hormone measurements. In addition, blood samples were drawn for measurements of ACTH and cortisol, and thyroid function tests at 07:00, 08:00 and 09:00 at the morning.

Results and conclusion: Of 55 patients included, there were 29 boys (52.7%) and 26 girls (47.3%) with an age range of 5-12.5 years. Growth hormone level was found to be below 3 ng/mL in 32 (58%) of the patients, being consistent with neurosecretory dysfunction. Thyroid function tests were found to be within normal range in all patients, while peak cortisol levels were found to be below 18 µg/dL with cortisol peak occurring at 07:00 AM. When 77.5% was used as cut-off value for grade of adenoid obstruction, sensitivity, specificity, positive predictive value and negative predictive value were calculated as 77%, 74%, 77% and 27%, respectively. Accuracy rate was found as 56%.

Conclusion: We concluded that likelihood of neurosecretory dysfunction and related growth retardation can be higher in cases with adenoid vegetation grade of 77.5%. We planned to study sleep profile 3 months after surgery in cases with adenoid vegetation in which neurosecretory dysfunction was detected. We think that early surgical treatment should be come order in cases with adenoid vegetation and that this can be further clarified by larger studies.

REFERENCES

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