Evaluation of Clinical Features and Treatment Response of Cases with Hyperprolactinemia

Şervan Özalkak, Elvan Bayramoğlu, Şenay Savaş Erdeve, Semra Çetinkaya, Zehra Aycan

University of Health Sciences, Dr. Sami Ulus Training and Research Hospital, Clinic of Children'sHealth and Disease, Pediatric Endocrinology

Objective

In this study, we planned to evaluate the patients with hyperprolactinemia etiology, clinical features and treatment responses

Material and Method

We evaluated retrospectively the features, clinical follow-up data and treatment responses of the patients with hyperprolactinemia in our pediatric endocrinology clinic between 01.01.2012-31.12.2018.

Results

- Thirty-one patients with hyperprolactinemia underwent follow-up in a seven-year period.
- The mean age of these cases was 15.7±1.5years.
- 27cases (87.1%) were female.
- The most common complaints in girls were menstrual irregularity / amenorrhea (n = 14) and galactorrhea (n = 8). **Table 1**
- In terms of etiology, microadenomas were observed in 9, macroadenomas in 4, idiopathic hyperprolactinemia in 12, and drug-induced hyperprolactinemia in 4 cases.
- The mean prolactin level in the whole group was 104.7 ± 145.4 (27.8-813) ng/ml.
- According to the etiology, the mean prolactin level was 43,6 ng/ml in drug- induced hyperprolactinemia, 137,8 ng/ml in microprolactinoma group, 285 ng / ml in macroprolactinoma group, idiopathic hyperprolactinemia group was 49.6 ng/ml.
- **All cases with prolactin level above 100 ng/ml were diagnosed as adenoma** (3 macroadenoma and 5 microadenoma).
- Medical treatment was performed in 24 patients (23 cases with cabergoline, 1 case with bromocriptine) and surgery was performed in 3 cases (1 patient with rathke cleft cyst, 2 cases with macroadenoma).
- Seven patients were followed without treatment.
- The mean cabergoline dose was 0.52 ± 0.21 (0.25-1) mg/week.
- **The mean time to normalization of prolactin levels was 2.6 ± 3 (1-12) months**.
- **There were no side effects related to cabergoline.**
- Postoperative prolactin levels did not return to normal in 2 patients with hyperprolactinemia due to macroprolctinoma and rathke cleft cyst, and the need for medical treatment continued.
- Multiple pituitary hormone deficiency (gonadotropin, TSH, ACTH) was diagnosed in one patient with macroprolactinoma. The patient's cabergoline treatment (1 mg / week) and prolactin levels returned to normal in the first month. At the eighth month the adenoma shrank almost completely.

Table 1. complaints in girls

Compl̈iants	n=27 (%)
Menstrual irregularity / amenorrhea	14(51,8)
Galactorrhea	8 (29)
Short stature	1 (3,7)
Delayed puberty	1 (3,7)
Hirsutism	1 (3,7)
Anti-dopaminergic drug	2 (7,4)

Table 2. complaints in boys

Compl̈iants	n=4 (%)
Gynaecomastia	1 (25)
Galactorrhea	1 (25)
Short stature	1 (25)
Headache	1 (25)

Table 3. etiology, characteristics and treatment of hyperprolactinemia cases

	n	Sex	Age (year)	Prolactin (ng/ml)		Treatment
Microadenoma	9	6/3	15,4 ± 1,5	137 ± 8	(43-308)	Medical 9
Macroadenoma	4	4/0	16,5 ± 1,3	285 ± 353	(75-813)	Medical 4 Surgery 2
anti-dopaminergic drug	4	4/0	15,6 ± 0,9 (15-17)	43 ± 5,4	(35,7-48)	Medical 1 Untreated 3
Rathke cleft cyst	1	1/0	13	67		Medical+ Surgery
Macroprolactinemia	1	1/0	17,5	29		Untreated
İdiopathic hyperprolactinemia	12	11/1	15,7 ± 1,6 (12-18)	49 ± 19	(28-88)	Medical 9 Untreated 3
Total	31	27/4	15,7 ± 1,5 (12-18)	104 ± 145	(28-813)	Medical 24 Surgery 3 Untreated 7

Conclusion

The cases diagnosed as hyperprolactinemia were mostly adolescent girls. The most common cause was the pituitary adenoma (42%) and 64% of these adenomas were microadenomas. All cases with prolactin level> 100 ng / ml were diagnosed as adenomas. In patients with hyperprolactinoma, a good response to medical treatment including those due to adenoma, and a small number of cases required surgical treatment.