

# Management of Hypoparathyroidism: Follow up of 20 Patients

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**Hypoparathyroidism (HP)** is a rare disease characterized by inadequate parathyroid hormone (PTH), resulting in hypocalcemia and hyperphosphatemia. Hypoparathyroidism can be transient, inherited, or acquired, and is caused by inability to synthesize or secrete PTH due to abnormal parathyroid gland development, destruction of parathyroid tissue, or peripheral resistance to PTH.

## Methods

Medical records from 20 children and adolescents diagnosed with hypoparathyroidism during 1992-2015 were reviewed

## Results

- 20 cases; 15 female, 5 male
- current age: 20,5 ± 8,5 (6,5-39,5) years
- age of onset of symptoms: 8,5 ± 6 (0,12-16,9) years
- age at diagnosis : 9 ± 6 (0,1-16,9) years

Table-1: Causes for admission	n (%)
convulsions and tetany	16 (75)
during follow up (hypocalcemia on preoperative laboratory tests)	2 (13)
incidentally during follow up (Diamond Blackfan anemia and APS1)	1 (6)
during an evaluation of psoriasis HDR (hypoparathyroidism, deafness, renal dysplasia) syndrome	1 (6)

Table-3 Biochemical characteristics of hypoparathyroidism

Tests	Mean	Min/Max	Reference
Serum Ca (mg/dl)	5,8	4,0/ 7,4	8,9-10,3
Serum PO4 (mg/dl)	7,5	3,6/ 11,5	2,5-4,6
alkaline phosphatase (U/L)	208,5	87/ 651	38-126
PTH (pg/ml)	6,2	2,1/ 857	12-88

Table-3: Etiology of hypoparathyroidism	n (%)
<b>Postsurgical</b>	<b>4 (% 25)</b>
• Primer HP	2
• Thyroid cancer	1
• Graves disease	1
<b>Medical</b>	<b>16 (% 75)</b>
• Primary HP (CaSR mutation)	6
• APS 1 (autoimmune polyendocrine syndromes)	4
• pseudohypoparathyroidism.	3
• Di-George Syndrome	1
• HDR Syndrome	1
• Diamond-blackfan anemia (haemosiderosis)	1

## Management

- low-salt and low-phosphate diets
- Calcium 30-70 mm/kg/d
- Calcitriol 10-50 ng/kg/d

- Persistent (3 times) 24-h urine calcium >4 mg/kg/d - **hydrochlorothiazide** , 8 patients
- Nephrocalcinosis - **SC teriparatide [PTH(1-34)] 0.7-2.2 mcg/kg/d**, 3 patients  
(seized because of dosing problems and unstable serum calcium level)

8 patients had calcifications in cranial CT and 2 patients had cataract at the initial diagnosis

**Complications (%25 cases)**  
**nephrolithiasis, (2 cases)**  
**nephrocalcinosis (3 cases)**

## Conclusion ;

Chronic treatment of hypoparathyroidism may be difficult to manage due to the need for a sensitive balance between calcium and phosphate levels in order to prevent nephrolithiasis, nephrocalcinosis, and soft tissue calcification in the kidney.