

CLINICAL PROFILE OF PARATHYROID ADENOMA IN CHILDREN AND ADOLESCENTS: A SINGLE CENTER EXPERIENCE

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INTRODUCTION

- Parathyroid adenoma (PRAD) is less common than in adulthood, but its morbidity is higher in children.
- The typical presentation is as incidentally discovered asymptomatic hypercalcemia.

AIM

- We aimed to evaluate the clinical characteristics of PRAD and our clinical experience, since early disease is often asymptomatic.

METHOD

- From 2010-2020, all children diagnosed with PRAD at our institution were reviewed.
- Clinical, biochemical, radiological aspects and follow-up characteristics of patients were evaluated.

RESULTS

Admission Characteristics

- There were eight subjects (F/M=6/2).
- Mean age was 13.80 ± 2.81 ranging from 10 to 17 years.
- Two were prepubertal.
- All symptoms and conditions were shown (figure 1).
- One had a family history of MEN-1 syndrome, and two were sisters with a family history of PRAD.
- Laboratory findings
 - PRAD could not be demonstrated by US in one patient.
 - Tc-99m-Sestamibi scintigraphy revealed the presence of PRAD in only six.
- Arrhythmia, nephrolithiasis, bone resorption were not observed in any of the subjects.
- All underwent parathyroidectomy. One subject was on pamidronate, and one other subject was on alendronate before surgery.

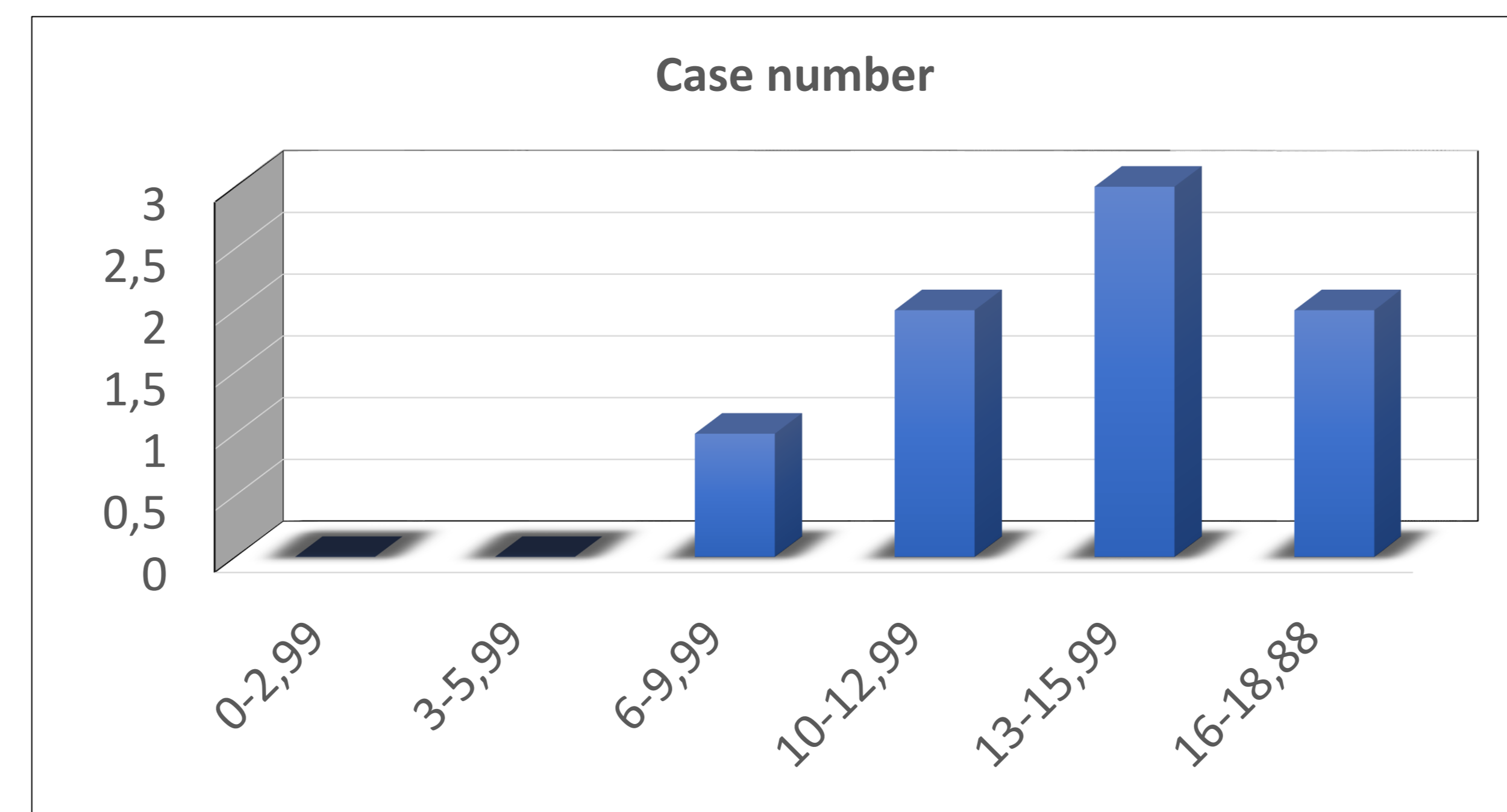


Figure 1. Age distribution of all cases respectively (year)

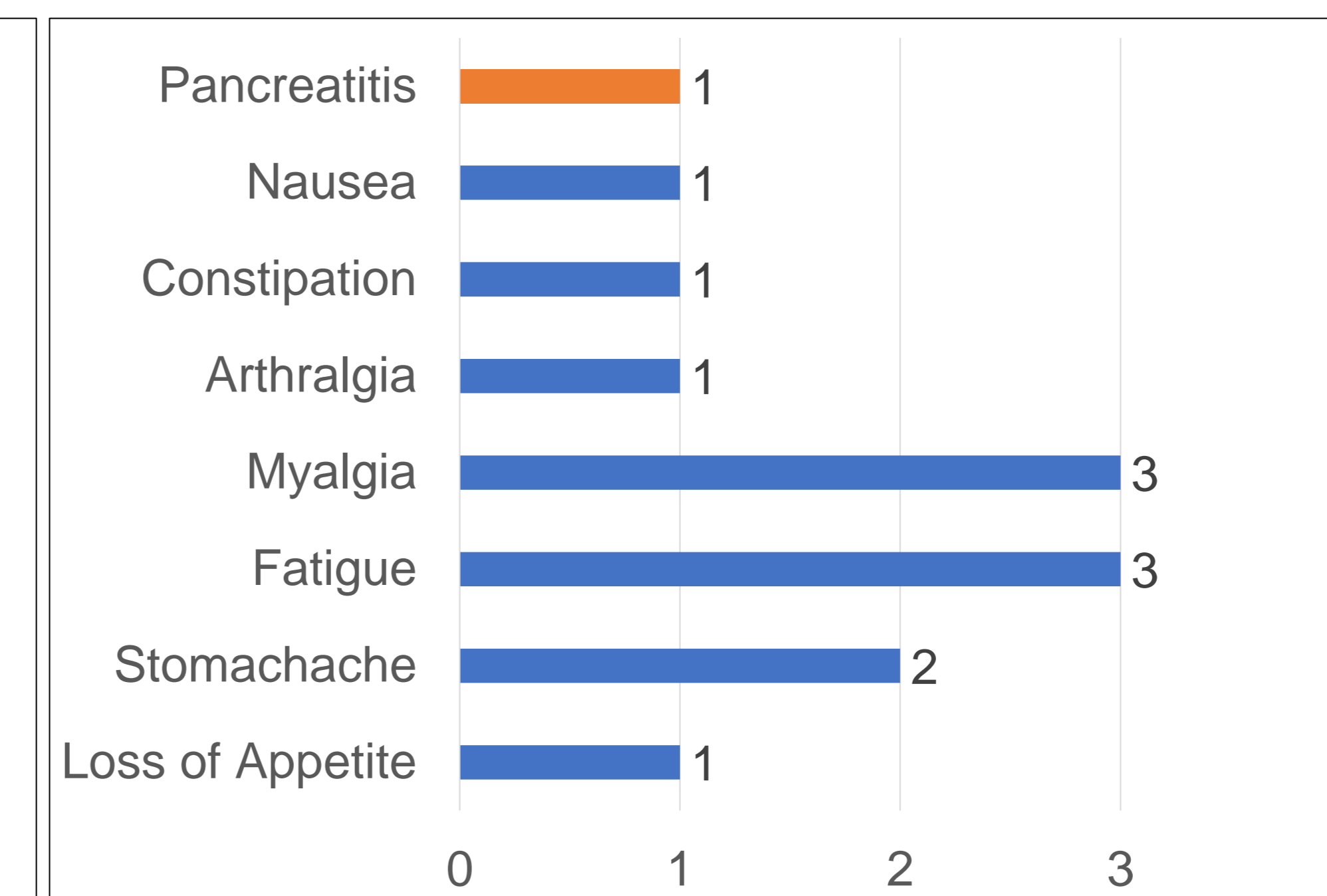


Figure 2. Presenting clinical symptoms and conditions in all cases

Table 1. Biochemical characteristics of all cases

	At Admission	On Operation Day	1st Day After Surgery	1st Year After Surgery
Ca (mg/dl):	12.59 ± 1.28 12.25 [11.2 ; 15.3]	11.44 ± 0.94 11.7 [9.6 ; 12.8]	8.78 ± 0.46 9.03 [8.2 ; 9.2]	9.72 ± 0.27 9.75 [9.4 ; 10.2]
P (mg/dl):	3.58 ± 0.79 3.64 [2 ; 4.6]	3.45 ± 0.61 3.22 [2.5 ; 4.49]	3.63 ± 0.74 3.59 [2.32 ; 5.2]	4.63 ± 0.75 4.38 [3.8 ; 5.94]
ALP (mg/dl):	222.38 ± 116.24 188 [83 ; 399]	203.25 ± 108.03 191 [76 ; 363]	195.5 ± 106.07 185.5 [57 ; 360]	163.33 ± 110.41 122 [53 ; 362]
PTH (pg/ml):	244.81 ± 173.61 181.1 [74.9 ; 645.4]	199.21 ± 89.29 211.05 [62 ; 332.3]	56.94 ± 55.99 40.65 [7.7 ; 195.9]	44.53 ± 15.31 37.55 [33 ; 76]

CONCLUSIONS

PRAD should be considered in children older than 10 years of age with hypercalcemia. It should be kept in mind that most of the cases are asymptomatic at diagnosis.

Suspected cases should undergo both US and scintigraphy to detect PRAD. Patients should be carefully followed up for risk of familial HPT.

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