

# Baby with Hypercalcaemia and Nephrocalcinosis Presenting as Failure to Thrive

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## Abstract

Failure to Thrive (FTT) can result from various factors, including organic causes such as congenital abnormalities, endocrine disorders, genetic conditions, or metabolic diseases, as well as inorganic factors such as improper feeding practices and parental neglect. This case involves a baby with food aversion leading to FTT, hypercalcaemia, and medullary nephrocalcinosis. Nephrocalcinosis involves calcium deposition in the renal medulla and is caused by hypercalcaemia, solitary hypercalciuria, or hyperphosphaturia. Its management requires a multidisciplinary approach.

**Keywords:** Failure to Thrive, Nephrocalcinosis, Hypercalcaemia, Hypercalciuria

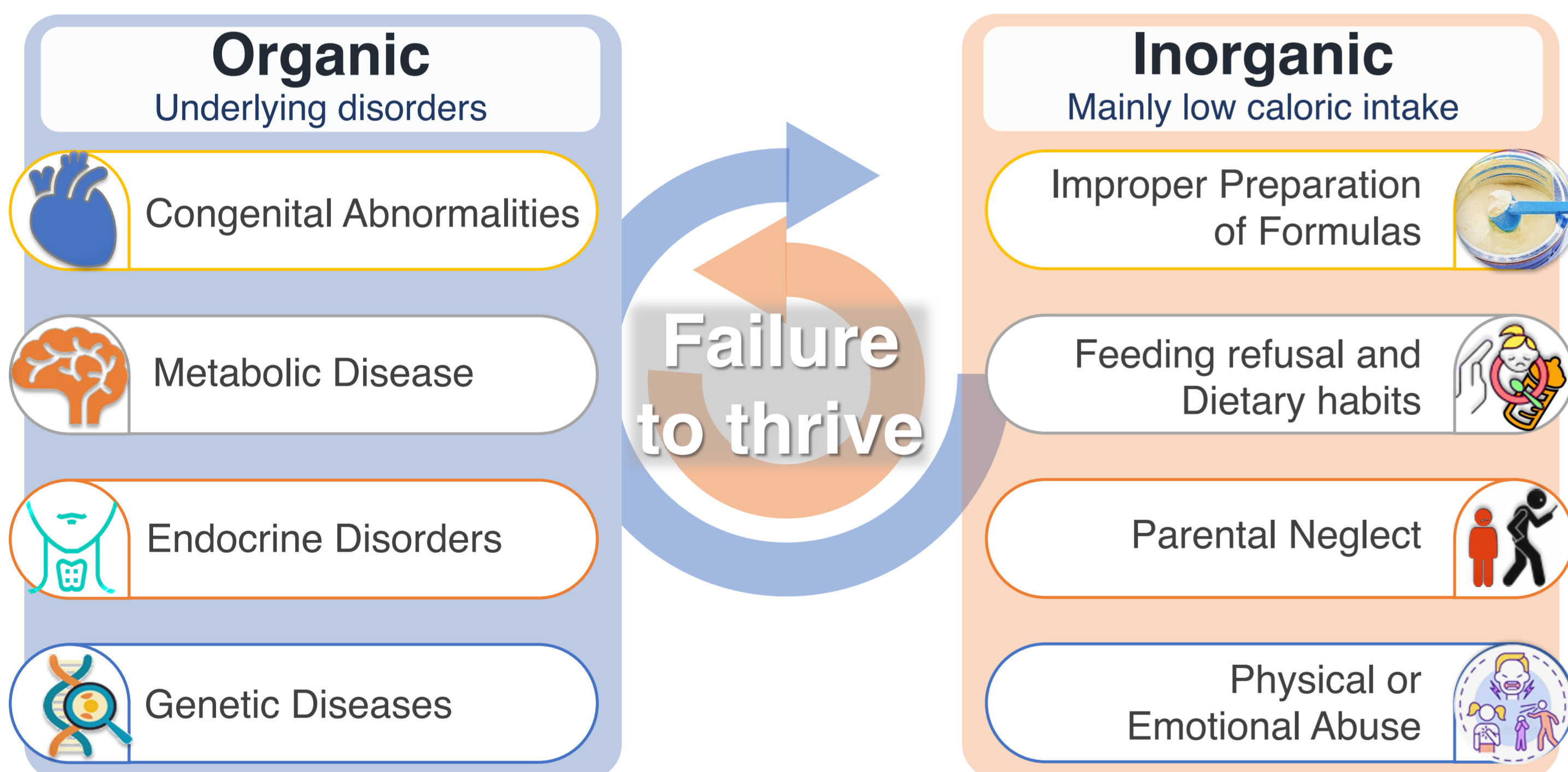


## Introduction

Failure to Thrive (FTT) can result from low intake, poor absorption, or high caloric demand<sup>1</sup>.



Pathophysiology can be organic such as congenital abnormalities of the heart, oesophagus, or intestine, endocrine disorders, genetic conditions, or metabolic diseases. More commonly mechanism can be inorganic such as improper preparation of formulas, feeding refusals, dietary habits, parental neglect, or physical or emotional abuse<sup>2</sup>.



## Case Report

This is a case of a baby who presented at 9 months of age with food aversion. Baby had started refusing milk feeds after being weaned off and was not taking solid foods either. Baby's weight was static for 2 months. Baby was treated for reflux and baseline investigations were done which showed hypercalcaemia. This led to changing milk to low calcium formula and further investigations. Abdominal USS (ultrasonographic Scan) raised suspicion of medullary nephrocalcinosis which was later confirmed by specialist scan of kidneys and urinary tract.

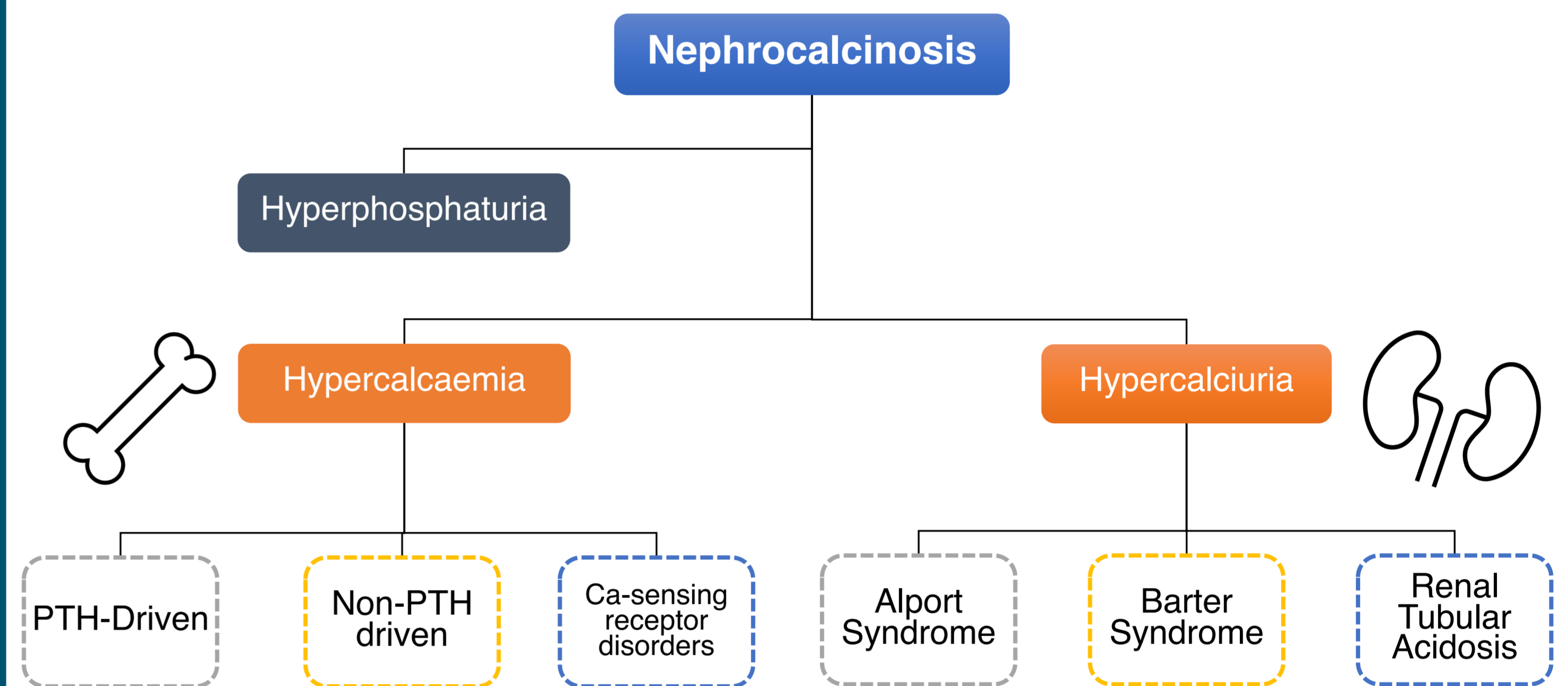


The baby was initially started on steroids and low calcium diet by tertiary team and has now been weaned off steroids and diet is being normalised and there is good tolerance and weight gain.

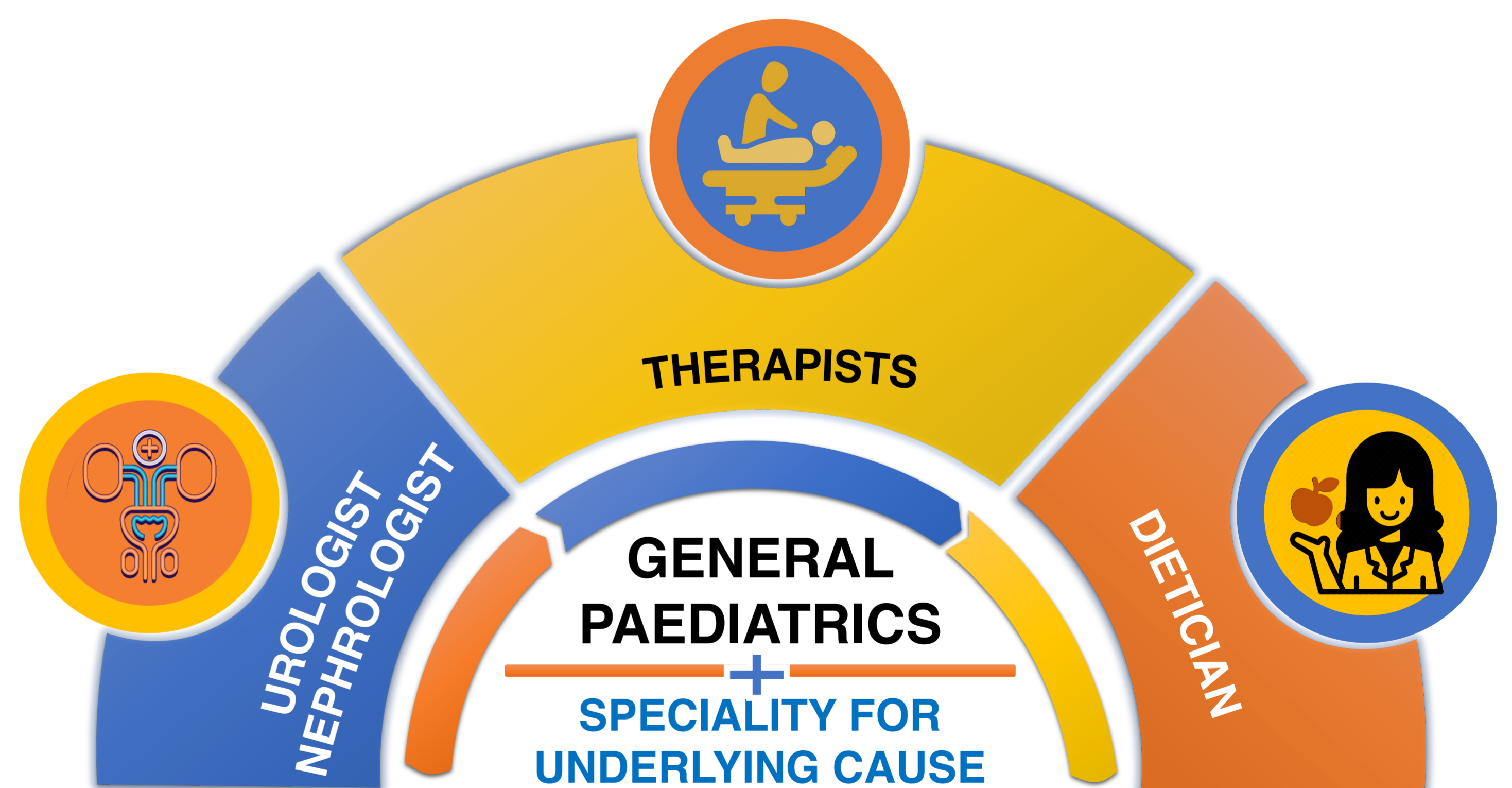


## Discussion

Medullary Nephrocalcinosis is a condition where renal medulla has generalized deposition of calcium (mainly calcium phosphate). This can be a result of hypercalciuria secondary to hypercalcaemia or solitary hypercalciuria in the absence of hypercalcaemia. Rarely, the etiology can rather be related to hyperphosphaturia<sup>3</sup>. Etiologies in cases of hypercalcaemia can be PTH-driven like primary (sporadic or familial) or tertiary hyperparathyroidism or can be non-PTH driven<sup>4</sup> and sometimes due to Calcium sensing receptor disorders. Non-metabolic causes with normocalcaemia are related to kidneys themselves and may include Alport Syndrome, Barter syndrome, or Renal tubular acidosis.<sup>3</sup> However, exact etiology is not always found. In such cases, management is usually case to case basis depending upon symptoms and response to treatment.



Management of Nephrocalcinosis is multidisciplinary with involvement of nephrology, urology, general pediatrics, any other medical speciality depending upon underlying condition, and multiple members of non-medical teams including dieticians and other therapists<sup>3</sup>.



## References

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