

DEFINITION

1. This is a term applied to those clinical disorders characterised by an increase in the circulating concentrations of parathyroid hormone. They can be classified into
 - 1.1. **primary hyperparathyroidism**
 - 1.2. **secondary hyperparathyroidism**
 - 1.3. **tertiary hyperparathyroidism**
 - 1.4. **pseudohyperparathyroidism**

CLINICAL MANIFESTATIONS

2. At the time of diagnosis most patients are relatively asymptomatic or have non-specific symptoms. Symptoms and signs are due to hypercalcaemia or hypercalciuria or from the effect of parathyroid hormone on the bones and joints.
3. Symptoms arising from **hypercalcaemia** may be multiple and varied. Neuromuscular symptoms include fatigue, muscle weakness, proximal myopathy and hypotonia. Hypertension may occur. Gastrointestinal symptoms include nausea, vomiting, constipation and dyspepsia. There may be an increased incidence of peptic ulcer and pancreatitis. Nervous symptoms include lethargy, drowsiness, depression and occasionally major psychiatric disturbance. Other symptoms include polyuria and pruritus.
4. **Hypercalciuria** may cause renal calculi. Up to 50% of patients present with kidney stones.
5. The **effect of parathyroid hormone on bones and joints** may lead to bone pain and tenderness from osteitis fibrosa cystica or from fractures through bone cysts. There may be arthralgia. There is an increased incidence of gout and pseudogout.

AETIOLOGY

6. **Primary hyperparathyroidism** is most commonly due to a single tumour, usually an adenoma. It may also be due to diffuse hypertrophy or multiple adenomata. The underlying aetiology is unknown. In some families the condition has been inherited as an autosomal dominant trait.
7. **Secondary hyperparathyroidism** is due to hypocalcaemia and is most commonly seen in vitamin D deficiency and chronic renal failure. The aetiology is that of the underlying condition.

8. **Tertiary hyperparathyroidism** is a term used for those with long-standing secondary hyperparathyroidism who develop autonomous gland function and hypercalcaemia. This is most commonly seen after renal transplantation and may also be seen in patients with long-standing malabsorption or chronic renal failure. The aetiology is that of the condition producing the secondary hyperparathyroidism.
9. **Pseudohyperparathyroidism** is caused by the production of parathyroid-like material secreted by tumours, particularly arising from the lung. The aetiology is that of the underlying condition.

CONCLUSION

10. **Hyperparathyroidism** is a condition resulting from an increase in circulating parathyroid hormone. It may be **primary**, the aetiology then being unknown or **secondary, tertiary**, the aetiology then being that of the underlying condition. **Pseudohyperparathyroidism** is a condition which mimics hyperparathyroidism but which does not stem from the parathyroid glands themselves, the aetiology of this condition being that of the underlying condition.

REFERENCES

Kanis J A. Disorders of calcium metabolism – Hyperparathyroidism. In: Weatherall D J, Ledingham J G G and Warrell D A (Eds). Oxford Textbook of Medicine. 2nd Ed. 1987. Oxford. Oxford University Press. p10.59–10.62.

Smith R. Disorders of the skeleton – Hyperparathyroidism. In: (Eds) Weatherall D J, Ledingham J G G and Warrell D A. Oxford Textbook of Medicine. 2nd Ed. 1987. Oxford. Oxford University Press. p17.22–17.24.

Spiegel A M. The parathyroid glands, hypercalcemia and hypocalcemia – Primary Hyperparathyroidism. In: (Eds) Wyngaarden J B, Smith L H and Bennett J C. Cecil Textbook of Medicine. Philadelphia. W B Saunders Company. 19th Ed. 1992. p1416–1417.

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