

PARATHYROID ADENOMA- USG FEATURES OF PARATHYROID ADENOMA***Dr. Rajesh Kumar, Dr. Medha Kaith, Dr. Arnav Shandil and Dr. Suresh Thakur**

Department of Radio-Diagnosis IGMC Shimla.

***Corresponding Author: Dr. Rajesh Kumar**

Department of Radio-Diagnosis IGMC Shimla.

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INTRODUCTION

Hyperparathyroidism is excessive production of PTH. Autonomous hyper-secretion of PTH causes primary hyperparathyroidism.

Most common cause of primary hyperparathyroidism is parathyroid adenoma but can also be seen with parathyroid gland hyperplasia (15%–20%) and carcinoma (0.5%)

Primary hyperparathyroidism, which may be caused by adenoma or hyperplasia is treated with high degree of success.

RELAEVANT HISTORY

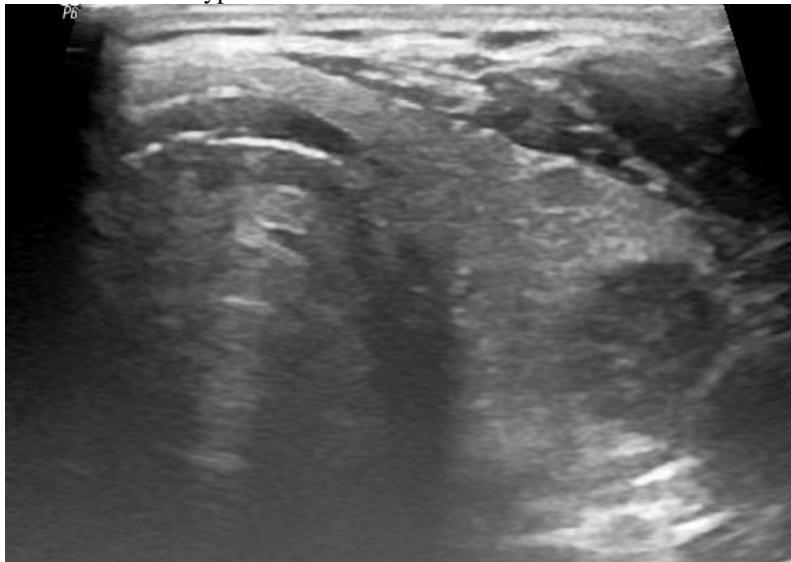
We present a case of 37 years old male who presented with features of bone pain and abdominal pain.

Biochemical parameters: PTH 285 ng/l.

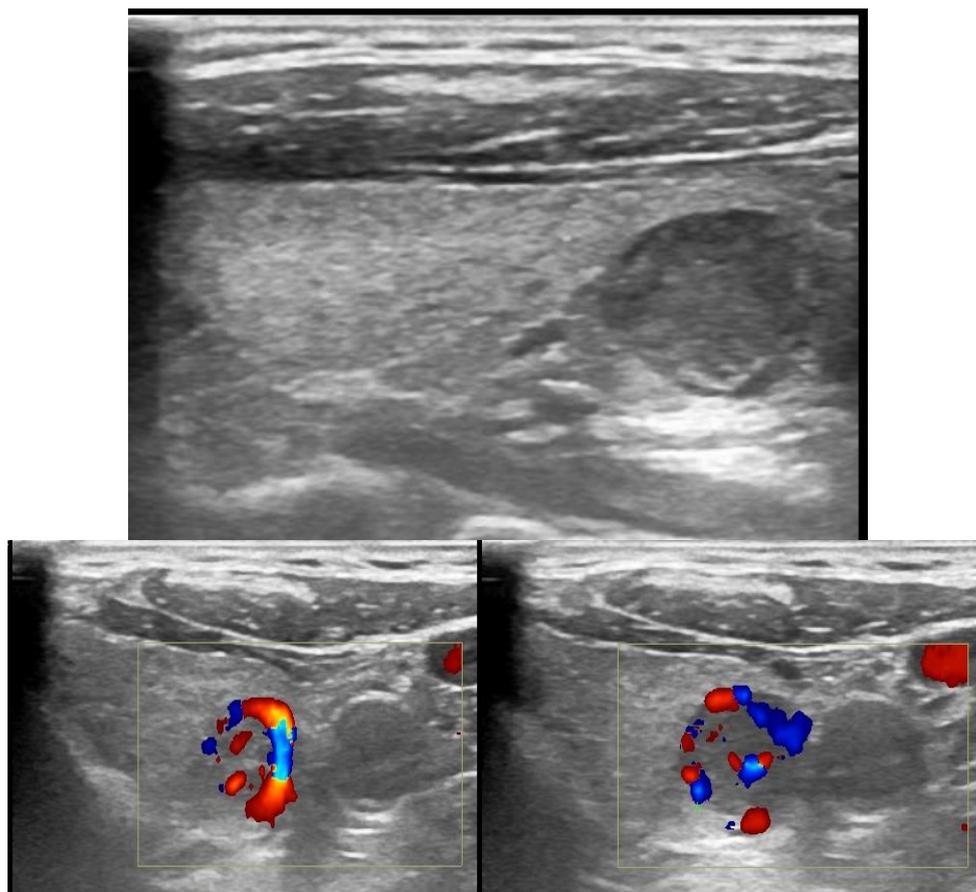
O/E: There was a palpable swelling in the lower left side of neck which moved with swallowing. It was non tender with normal overlying skin.

IMAGING FINDINGS

USG axial section showed well defined hypoechoic lesion of 10X9mm in relation to the left lobe of thyroid



USG sagittal section showed that the lesion was in relation to the inferior pole of thyroid.



CDFI showed peripherally increased vascularity making 270 degree arc

RESULTS

We were accurately able to diagnose and localise exact location of parathyroid adenoma in the left inferior parathyroid gland which was successfully resected by parathyroid lobectomy.

On follow-up Histopathology revealed parathyroid adenoma.

Parathyroid hormone level decreased to 70 ng/l from 285ng/l on 10th post-op day.

DISCUSSION

Parathyroid adenoma is the most common cause of PHPT and surgical excision is the definitive treatment.

On USG – parathyroid adenoma is usually hypo echoic as compared to thyroid gland and may be hyper echoic in cases of parathyroid lipoadenoma. It may be homogeneously solid or may show cystic degeneration.

ON CDFI – Parathyroid adenoma shows vascular arc sign in 90°- 270° which differentiates it from LN.

Sensitivity of USG (98%) is higher than the sensitivity of MIBI scan (93%) for localizing abnormal parathyroid gland. USG also has a higher preoperative localization accuracy (93%) in comparison to MIBI scan (90%).^[1]

Traditional surgical therapy like bilateral four-gland exploration is successful in more than 95 percent cases. Newer development of focused surgical approaches over past few years has made role of imaging highly important for exactly localising abnormal parathyroid glands before surgery.^[2]

CONCLUSION

Grey scale imaging and colour Doppler are cheap, convenient and have high sensitivity for localising parathyroid adenoma.

Newer development of focused surgical approaches require precise localisation which can be done by ultrasonography.

MIBI scan can be done to localise ectopic parathyroid adenoma.

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