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CASE REPORT

Pearl Pendant Around Her Neck: An Unusual Case Of Stone Seen In A Colloid Goitre

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ABSTRACT

Stones are frequently seen in the gall bladder, kidney and the urinary tract. Rarely can a large stone be found in the thyroid. Only few cases of calcification in thyroid have been reported, especially in association with papillary carcinoma (thyroid). A case of a large stone (2.9 cm x 1.9 cm x 1 cm) in the thyroid, in association with colloid goiter in a 35 yrs old female is documented here.

Key Words : thyroid, stone, calcification

Key Messages:

- Stones can be seen in an enlarged thyroid
- Their presence is **not** an indicator of increased association with malignancy

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Introduction

Stones are commonly seen in the gall bladder and the urinary tract, but rarely can they be found in the thyroid. Few cases of calcification of the thyroid have been reported in literature, but rarely a fully developed stone (dense calcification) has been found. A case of stone in the thyroid was documented in medical literature way back in 1946 [1]. Thyroid calcifications may occur in both benign and malignant diseases. Thyroid calcifications can be classified as microcalcification, coarse calcification, or peripheral calcification [2]. We report here, a case of well formed large stone in a thyroid specimen.

Case Report

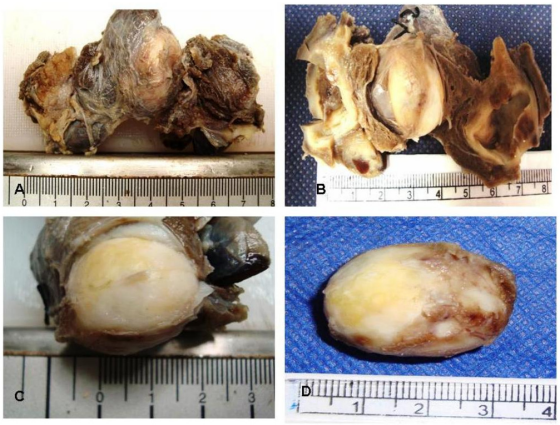
Clinical Findings

A 35 yrs old female presented with a midline neck swelling. The swelling was gradually increasing in size since 2 yrs. There was a recent complaint of mild dysphagia, but without dyspnoea or dysphonia. There was no history of trauma or drug intake. On ultrasonographical evaluation, dense calcification was reported towards the left lobe of the thyroid.

On examination, a solitary vague midline swelling of size 8.0 cm x 4.0 cm, which was more towards the left side and moved with deglutition, with a smooth surface and a bony hard consistency, was noted. No lymph nodes were palpable in the neck. FNAC performed from multiple sites showed a colloid rich aspirate with normal follicular cells from one side. However, it was difficult to perform the procedure from other sites, as a considerable degree of resistance was encountered during the process. In view of the large, hard mass with recent clinical developments and non-conclusive radiological and cytological findings, an excisional biopsy was advised.

Pathology Findings

Gross: A single globular and well-circumscribed mass, measuring 7.5 cm x 3.1 cm x 1.6 cm was received, with a smooth, brown external surface[Table/Fig 1] [Fig 1 A]. The cut surface was glistening, smooth and dark brown, with few cystic areas of different sizes. A well formed stone was found to be lodged within a cavity [Fig 1 B] .The stone was oval, 2.9 cm x 1.9 cm in size and had smooth contour and a creamy white colour [Fig 1 C and D].



[Table/Fig 1]

Fig 1A: Globular and well-circumscribed mass

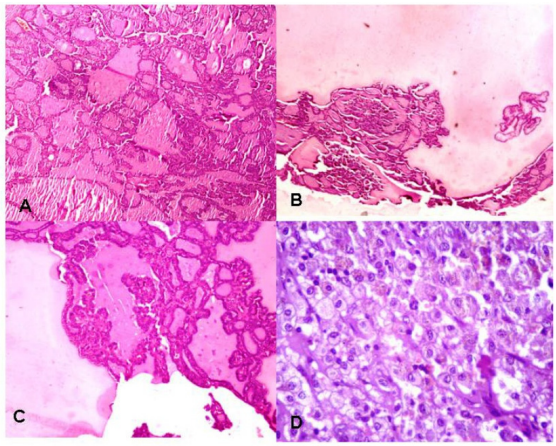
Fig 1B: Cut Surface showing cystic areas of different sizes having a stone lodged within a cavity.

Fig 1C: A well formed stone with thyroid tissue

Fig 1D: Well formed stone

Microscopic Findings and Impression

Pieces processed from the representative areas showed thyroid follicles of varying sizes, lined by cuboidal cells and filled with colloid [Table/Fig 2] [Fig 2 A and B] In one area, a cystic space filled with colloid and surrounded by macrophages was noted [Fig 2 C and D] The findings were consistent with colloid goiter undergoing cystic changes along with calculi.



[Table/Fig 2]

Fig 2 A Thyroid Follicles Of Varying Sizes (H&E, 40x)

Fig 2 B: Thyroid follicles of varying sizes with cystic space (H&E, 40x)

Fig 2 C :Cystic space filled with colloid (H&E, 40x)

Fig 2 D: Cystic space surrounded by macrophages (H&E,400x)

Discussion

Very few cases have been documented in literature to have calcification in a thyroid lesion, much less, with a stone formation. Histologically, thyroid calcification is divided into the psammomatous and dystrophic types [3]. Psammomatous calcification consists of laminated round calcium deposits in the epithelium [4].It is now well accepted that papillary thyroid carcinoma frequently forms psammomatous calcification, which can be detected as microcalcification on ultrasonography [5]. By contrast, dystrophic calcification consists of nonlaminated amorphous deposits in fibrous tissue septa rather than in the epithelium [4]. Inspissated colloid calcifications in benign thyroid lesions may mimic micro-calcifications in thyroid malignancies [6]. Peripheral calcification is one of the patterns which is most commonly seen in a multinodular thyroid, but it may also be seen in malignancy [7]. Benign nodules have coarse calcifications, especially with long disease

duration [8]. On review of literature, we found that there was 18.5% prevalence of malignancy among thyroid nodules with peripheral calcification, [9] and thus, chances of malignancy were higher in patients who showed calcification in a solitary nodule. So much so, surgery should be recommended in such cases, regardless of the result of the fine-needle aspiration cytological findings [10]. However, there was no increase in the incidence of malignancy in the cases of mutinodular goiter showing calcification.

In the present case, it was probably due to dystrophic calcification in the colloid after secondary degenerative changes, as the adjacent thyroid lobules showed features of colloid goiter with secondary degeneration. This patient neither had gall stones nor stones in the urinary tract. We did not find any literature suggesting any association between stone in the thyroid and stone at other sites.

To the best of our knowledge, extremely few cases of a well developed stone have been reported in the medical literature. This case report suggests that the possibility of stone in an enlarged thyroid should be kept in mind during the evaluation of a case of goiter.

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