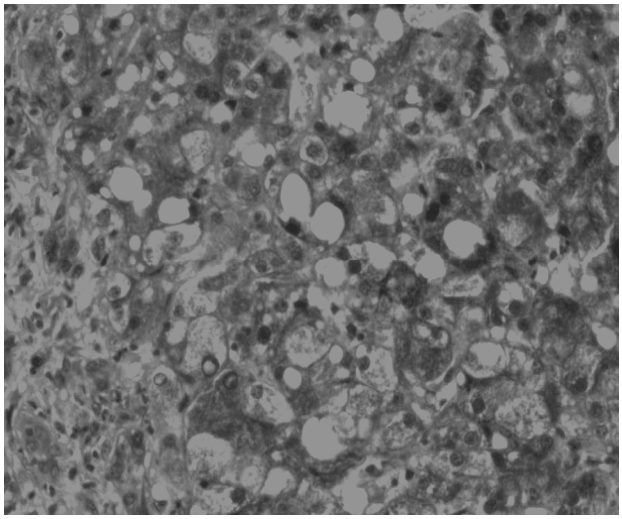
Figure 3: Medium- power view of liver biopsy with amiodarone toxicity; note patchy steatosis and neutrophilic infiltrate. H&E; original magnification x200.



Conclusion

Amiodarone is surely a safe and very effective anti-arrhythmic drug, but should be administered with a close clinical monitoring and the lowest dosage possible for arrhythmia control. There are now numerous reports in the literature describing liver cirrhosis associated with amiodarone. Although the incidence of this complication has is rare with the use of lower doses of amiodarone, it remains an important diagnostic consideration given the increased use of this drug.

References:

1. Kowey PR, Friehling TD, Marinchak RA, Sulpizi AM, Stohler JL. Safety and efficacy of amiodarone. The low-dose perspective. Chest 1988; 93: 54-9.
2. Kerin NZ, Aragon E, Faitel K, Frumin H, Rubenfire M. Longterm efficacy and toxicity of high- and low-dose amiodarone regimens. J Clin Pharmacol 1989; 29: 418-23.
3. Vorperian VR, Havighurst TC, Miller S, January CT. Adverse effects of low dose amiodarone: a meta-analysis. J Am Coll Cardiol 1997; 30: 791-8.
4. Kum LC, Chan WW, Hui HH, et al. Prevalence of amiodarone-related hepatotoxicity in 720 Chinese patients with or without baseline liver dysfunction. Clin Cardiol. 2006; 29:295-9.
5. Simon JB, Manley PN, Brien JF, Armstrong PW. Amiodarone hepatotoxicity simulating alcoholic liver disease. N Engl J Med 1984; 311: 167-72.
6. Poucell S, Ireton J, Valencia-Mayoral P, et al. Amiodarone-associated phospholipidosis and fibrosis of the liver. Light, immunohistochemical, and electron microscopic studies. Gastroenterology 1984; 86: 926-6.
7. Goldman IS, Winkler ML, Raper SE, et al. Increased hepatic density and phospholipidosis due to amiodarone. Am J Roentgenol. 1985; 144: 541-6.
8. Kojima S, Kojima S, Ueno H, Takeya M, Ogawa H. Increased density of the liver and amiodarone-associated phospholipidosis. Cardiol Res Pract. 2009:1-3.

Nabil Ben chaabane, Olfa Hellara, Leila Safer, Wissem Melki, Fethia Bdioui,Abdelfattah Zakhama, Hammouda Saffar

Department of Gastroenterology and Hepatology, Monastir Hospital,Tunisia University of Monastir

---

A mixed medullary-follicular thyroid carcinoma discovered by fine needle aspiration

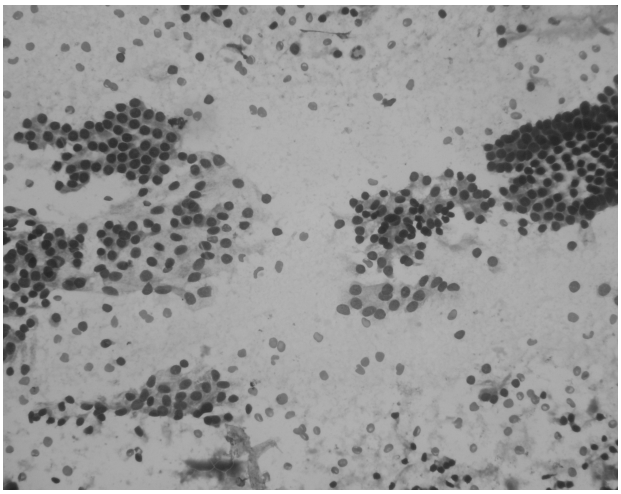
Mixed medullary and follicular cell carcinoma (MMFCC) of the thyroid is rare, accounting for less than 5% of thyroid medullary carcinoma. Histologically, MMFCCs are tumours showing the morphological features of both, medullary carcinoma with immunoreactive calcitonin and follicular (or papillary) carcinomas with immunoreactive thyroglobuline [1]. Although the histologic and immunohistochemical findings of MMFCC are well studied, there are some uncertainties about its cytopathologic features.

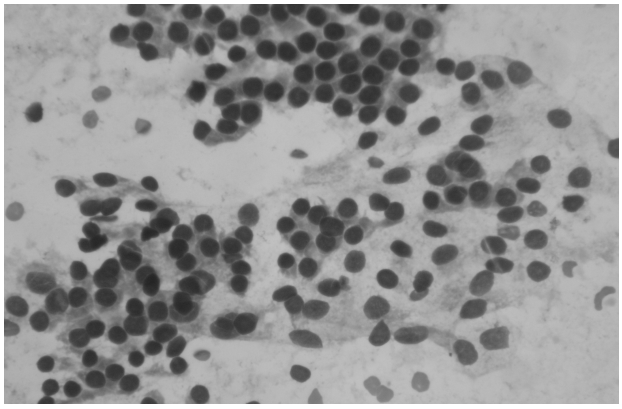
We report a case of MMFCC and describe its cytological and histological aspects.

Case report

A 57-year-old female patient with thyroid enlargement was admitted to ORL department. Thyroid ultrasonography revealed a 2 cm solid nodule within the right thyroid lobe. The fine needle aspiration cytology (FNAC) was highly cellular with a biphasic nature. The first component was predominant made of several three-dimensional cohesive clusters of monomorphic follicular cells with a small oval nuclei, and scant cytoplasm in a background devoid of significant colloid. In these three-dimensional cohesive clusters occasional microfollicles were also observed. The second component was made of loosely cohesive clusters of pleomorphic polygonal and spindle shaped cells with finely granular chromatin nuclei, and an abundant granular cytoplasm. The serum calcitonin level was elevated or borderline. The aspiration biopsy was reported as malignant, the diagnosis of mixed medullary follicular carcinoma was suspected (Figures 1a, 1b).

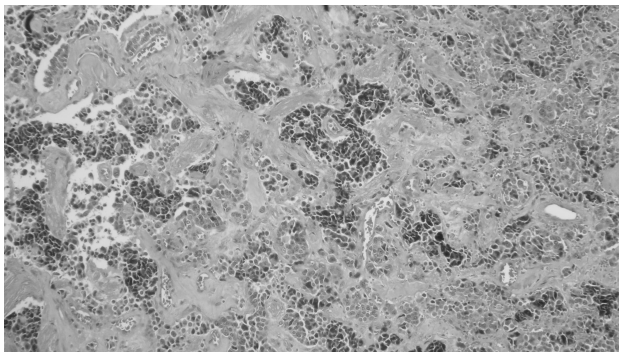
Figure 1 (a, b) : Fine needle aspiration (FNA) demonstrating biphasic features; three-dimensional cohesive cluster of follicular cells and rare non-cohesive polygonal cells with eccentric pleomorphic nuclei, and an abundant granular cytoplasm

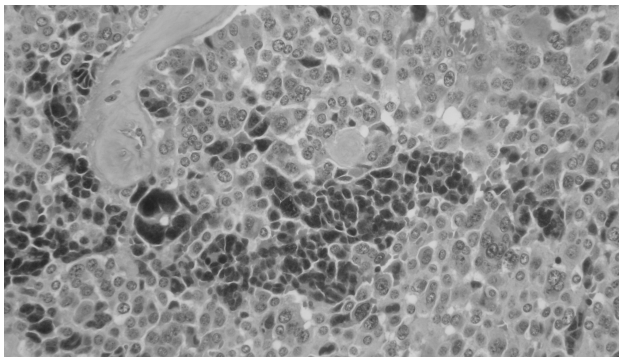




The patient underwent bilateral total thyroidectomy with bilateral mediastino-recurentiel lymphadenomectomy. On macroscopy, it was a solitary nodule circumscribed measuring 2/2 cm located in the right thyroid lobule. Te cut section was tan and firm with multiple calcifications. Histopathological examination of the right thyroid lobe revealed the presence of a tumoral proliferation made of sheets imbedded into an abundant amyloid stroma. These sheets were made of two types of cells; polygonal cells with abundant granular cytoplasm and eccentric plasmocytoid nuclei mixed with round to oval cells with hyperchromatic nuclei, coarsely granular chromatin, and moderate to severe degrees of pleomorphism (Figures 2a, 2b).

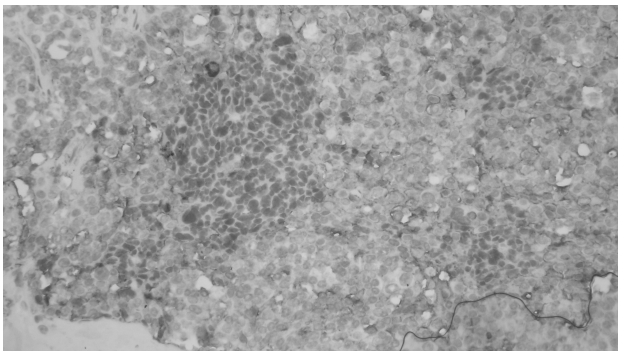
Figure 2 (a, b): Predominantly solid growth pattern made of two types of cells: polygonal cells with eccentric atypical nuclei mixed with round to oval hyperchromatic cells. Tumour is intersected by abundant amyloid deposit.

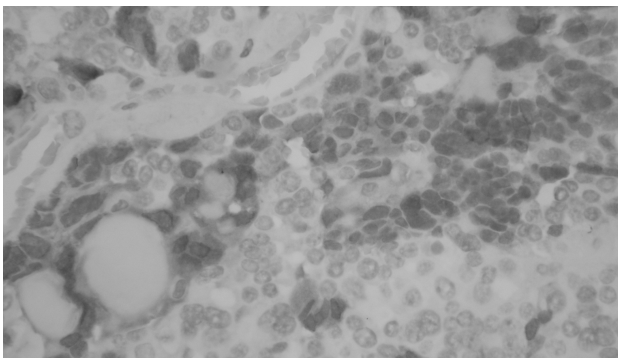




Immunohistochemically, the large polygonal cells were positive for calcitonin (Figure 3a) and CEA. The second type of cells was positive for thyroglobuline (Figure 3b) and negative to neuroendocrine antibodies. This tumour was confrmed as MMFCC. The patient was given radioactive iodine therapy. She was well 1 year after the operation. Repeated measurements of serum calcitonin and CEA levels were normal. Total body scan revealed no radioactive iodine uptake in the thyroid bed, bones, or lungs.

Figure 3: (a) Medullary carcinoma component immunostained for calcitonin
(b) Follicular carcinoma associated immunostained for thyroglobulin





Conclusion

The presence of a medullary carcinoma component should always be kept in mind when evaluating thyroid FNACs even in presence of a follicular neoplasm. Because of its behaviour, which is more aggressive than follicular carcinomas of the thyroid, preoperative recognition of MMFCC in FNAC material is important for a rapid and adequate treatment.

References

[1] Hedinger C, Williams E, Sobin L: Histological typing of thyroid tumours. ed 2 World Health Organization International Histological Classification of Tumors, 1988, Springer-Verlag, Berlin

Ramy Ben Salah (1), Amina Mekni (2), Raoudha Doghri (2), Nidhameddine Kchir (2), Slim Haouet (2), Ghazi Besbes (3), Sami Bouchoucha (1), Moncef Zitouna (2)