

IMPACT OF ANTITHROMBOTIC AND/OR ANTICOAGULANT TREATMENT IN CITOLOGICAL RESULTS OF THYROID FINE-NEEDLE BIOPSY

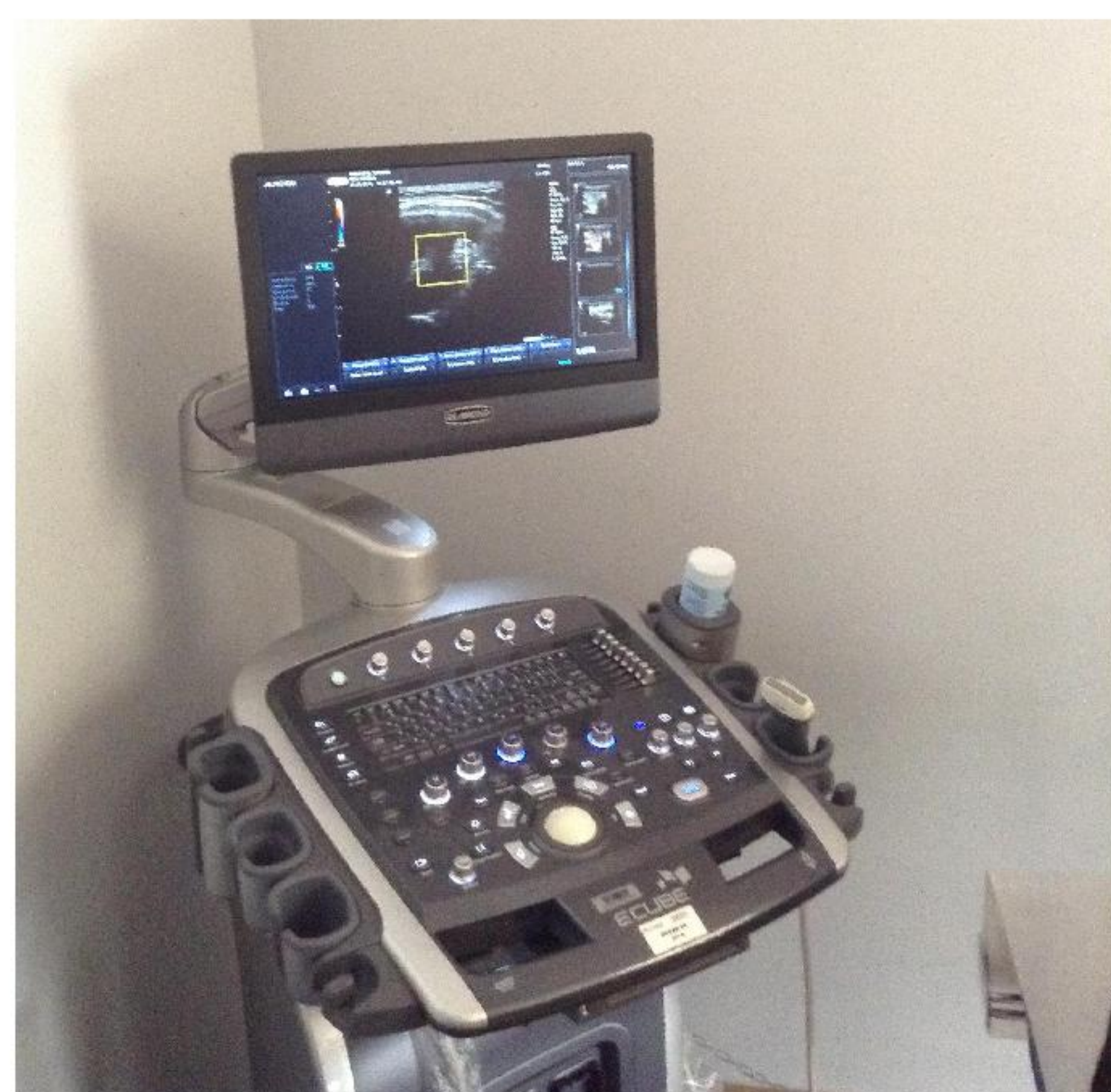
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Introduction

Fine-needle aspiration biopsy (FNAB) of the thyroid gland is an accurate diagnostic test used routinely in the initial evaluation of nodular thyroid disease. A sizeable subset of patients are found to be taking antithrombotic and/or anticoagulant (AT/AC) medications. This fact creates a dilemma for the endocrinologist, who must weigh the risk of withholding these medications (and the associated potential benefit of diagnosis) against the perceived increased risk of iatrogenic bleeding.

Material and Methods

- ✓ We examined medical histories of patients who underwent ultrasound-guided fine needle aspiration biopsy (US-FNAB) of thyroid nodules from the whole period 2012-2014, in order to determine whether there was a significantly increased incidence of bleeding complications in patients on AT/AC medications (test group) compared to patients not receiving AT/AC therapy (control group).
- ✓ These medications included aspirin or clopidogrel in 40 patients (4.38%), warfarin or acenocoumarol in 22 patients (2.40%) (with target INR < 2.5); 21 patients (2.30%) were taking more than one antithrombotic medication.
- ✓ Ultrasound examinations were performed with Ecube 9 Diamond ultrasound scanner (Alpinion Medical Systems Co., Seoul, Korea) using 3-12-MHz linear transducers.
- ✓ All studies were performed by the same experienced operator and citopathologist team. The χ^2 test was used to assess statistically significant differences between test group and control group.



Results

A total of 83 patients (9.09%) were taking AT/AC medications without preprocedural interruption. Five US-FNAB-related hematomas (0.5%) occurred. Three hematomas developed in patients on AT/AC treatment, and 2 hematomas developed in patients who did not take AT/AC medications ($P = 0.0014$). Twenty-four patients in the test group (2.6%) were labeled as “nondiagnostic” cytology, versus 84 patients in the control group (9.2%) ($P < 0.0001$).

| | Haematoma | No bleeding complications | Non-diagnostic cytology | Satisfactory cytology |
|--------------------------|-----------|---------------------------|-------------------------|-----------------------|
| Antithrombotic | 3 (0,3%)* | 80 (8,7%) | 24 (2,6%)** | 59 (6,5%) |
| No Antithrombotic | 2 (0,2%) | 828 (90,7%) | 84 (9,2%) | 746 (81,7%) |

* $P < 0.01$; ** $p < .0001$

| | Papillary carcinoma | Follicular lesion | Cyst | No Cyst |
|--------------------------|---------------------|-------------------|---------|-----------|
| Antithrombotic | 6 (1%) | 2 (0,2%) | 7 (1%) | 76 (8%) |
| No Antithrombotic | 62 (7%) | 19 (2%) | 61 (7%) | 769 (84%) |

No significant differences were found

Conclusion

Our results revealed an increased incidence in “non diagnostic” or “unsatisfactory” cytology in patients on AT/AC treatment, finding not described in previous studies until now. This could be related to a greater blood fluidity associated with lower blood coagulability. Our results also showed a slightly increased bleeding risk in patients on AT/AC treatment. Despite of this fact, most of studies argue that US-FNAB may be performed safely on a patient taking standard doses of aspirin or anticoagulants.



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