

# Gallbladder Carcinoma of the Thyroid Revealed by an Acute Festered Thyroiditis: A Literature Study about a Case

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## Abstract

The cutaneous extension of gallbladder thyroid carcinoma is uncommon and is among the aggressive forms of the disease. We are reporting the case of a woman of 54 that shows acute festered thyroiditis worsened by a necrotic ulcer wound on the skin lasting 3 weeks amid a big neglected hetero-multinodular goitre, evolving since 20 years. The anatomopathological test showed a gallbladder thyroid carcinoma of the thyroid with severe inflammation. The treatment consisted of a complete thyroidectomy with recurrent bilateral dredging. There was a favourable evolution. Gallbladder carcinoma, in its aggressive aspect, may be linked to the occurrence of acute festered thyroiditis. Therefore, the prognosis of our patient was favourable.

## Keywords

Thyroiditis, Gallbladder Carcinoma, Suppuration

## 1. Introduction

Thyroid cancer represents 1% to 2% of neoplastic diseases and 90% of endocrinal cancer cases [1]. Acute festered thyroiditis is an uncommon endocrinal disease which is potentially lethal and represents 0.1% to 0.7% of the overall thyroiditis pathology [2]. It is linked to cancer in some exceptional cases [3]. We are reporting a case of acute festered thyroiditis which reveals gallbladder carcinoma of the thyroid.

## 2. Observation

The patient is a 54 years old woman who did not have any particular pathology in the past. She came for a check-up about a previous painless cervical tumefaction, evolving for almost 20 years, which started aching and she became feverish in 3 weeks' time (**Figure 1(A)**). Though she received a treatment with anti-inflammatory medicines and antibiotics, prescribed at the hospital, there were no improvements. The test showed a general alteration of her health with pallid mucous membranes and 141/87mmhg blood pressure, 38.4°C temperature and a pulse rate of 91 beats per minute. There was 10 cm diameter wide of an earlier cervical mass which was sensitive, tough at the periphery, soft at the centre, fluctuating with a fistulising propensity, and fixed while swallowing. The function showed a serous liquid more or less purulent which could not be analysed. This clinical picture evoked acute festered thyroiditis on nodular goitre. The cervical lymph node areas were free at the clinic. The scan showed a bulky multi-hetero-nodular goitre from above with some purulent collections in some places. The thyroid stimulating hormone (TSH) was less than 0.005 mUI/L and the free T4 (FT4; thyroxine) reached 50.10 pmol/L. The numbering system showed 7.3 g/dl microcytic, hypochromic anaemia (inflammatory type) and 30 mg/l high C-Reactive Protein (CRP).

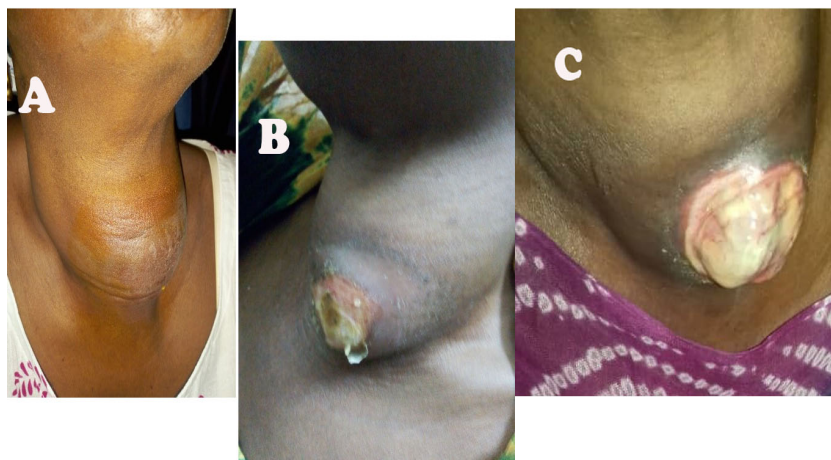
Thus, the tests concluded an Acute Festered Thyroiditis.

The patient had been put under antibiotic treatment with amoxicillin + clavulanic acid, analgesic, synthetic antithyroid drugs and an oral iron supplementation. After one week, she returned for a check-up and a worsened clinical picture showed up with an ulceration regarding the mass through which came out a serous, opalescent liquid, (**Figure 1(C)**) that persisted even though it had been being regularly treated with honey and oxygenated water with Dakin® based bandage for more than a month. The patient might have applied on an undocumented phytotherapeutic product on the thyroid mass. That unknown medication might have eroded the skin and caused fistula (**Figure 1(A)** and **Figure 1(B)**).

We thought about making computed tomography and biopsy but due to lack of materials for such tests in rural areas and poverty, that wasn't possible.

One month before the check-up, the complete blood count (CBC) showed severe anaemia with a haemoglobin rate of 4 g/dl through the martial treatment. The patient was on drip with two blood bags followed by a complete thyroidectomy program after a test and a favourable pre-anaesthetic check-up.

The surgical protocol consisted firstly in a low transverse cervical incision circumscribing the wound, then a dissection with recurrent cervical lymph node dissection of the two sides (with an opening at the left side of two recurrent lymphadenopathies of about 2 cm diameter). That opening was closed by suture under tension done with single stitches. The surgical outcomes were simple: there was neither recurrent paralysis nor hypocalcaemia. The pathological results showed a vesicular carcinoma with a high inflammatory thyroiditis.



**Figure 1.** Different evolutionary stages of acute festered thyroiditis after with (B) and (C) following the application of the phytotherapeutic product.

The patient had been under thyroid hormone medication with 100 micrograms a day during the follow-up period. She came for a check-up one month later, then followed a three-month-check-up program for three years. The outcome was good with neither any recurrence of the disease, nor bothersome aesthetic sequelae.

### 3. Discussion

Gallbladder carcinoma is considered to be the most aggressive [1] form of the subtype of thyroid cancer. A good prognosis can only be made if it is encapsulated [4]. We are reporting an uncommon case of capsule rupture with extended extra-cutaneous communication of gallbladder carcinoma deriving from a fistulae induced by a thyroid suppuration. A similar case of acute festered thyroiditis is associated with a thyroid metastasis of oesophageal cancer [3]. The abnormal thyroid structures, such as multi-nodular goitres, nodes or malignant tumours, are supposed to make the thyroid gland more sensible to suppuration [5]. It is said that both common and uncommon thyroid cancers have a cyst [6]. In our patient, the histology showed vesicular carcinoma. But hyperthyroidism associated with a biological inflammatory syndrome and the rapid evolution of the suppuration in three (3) weeks made us think about acute festered thyroiditis.

Is the occurrence of acute festered thyroiditis in this context linked to gallbladder carcinoma? Generally, when thyroiditis resists to invading organisms, there might have been a complete encapsulation, a generous blood and lymphatic vascularization, and the local presence of iodine [3]. This presence might indeed be disturbed by the presence of cancer cells. In adults, the proposed routes of infection are as follows: a lymphatic or haematogenous spread, a direct inoculation of the thyroid or a surrounding anatomy, the direct extension of an abscess and the fistula spread of the pear-shaped sinus, in the case of a pre-existing thyroid disease or an immunocompromising condition [4]. Some authors report that the enzyme defense system against free radicals might be al-

tered in patients with multinodular goitres and papillary carcinomas [7].

Concerning the hormonal status, patients with differentiated thyroid carcinomas are generally in euthyroid state. Hormonal disturbances from hyperthyroidism were therefore described in the case of metastasis, particularly a pulmonary one [8] [9]. But among Ryo *et al.*'s four (4) patients suffering from vesicular carcinoma, two (2) were in euthyroid states: one in hyperthyroidism and the other hypothyroidism [10]. Thyrotoxicosis only happens in 5% to 10% of patients suffering from acute febrile thyroiditis [11]. The anti-TSH antibodies stimulate angiogenesis and play an essential role in the growth and development of thyroid tumour [12]. Our patient had a TSH rate of 0.005 mUI/L and a free T4 (FT4; thyroxine) high 50.10 pmol/L. The hormonal disturbance, be it induced by carcinoma or acute febrile thyroiditis, probably influences the evolution of the tumour in our patient.

Acute febrile thyroiditis was traditionally treated with a combination of surgical and medical treatment modalities implying a partial or complete thyroidectomy [11]. Thyroid surgery completed by a recurrent bilateral dredging had been realized on our patient after an inefficient medical treatment. The surgery outcomes were simple with an excellent prognosis.

#### 4. Conclusion

Gallbladder thyroid cancer is uncommon as well as acute febrile thyroiditis. The identification of the mechanisms of the latter's occurrence and its association, more or less frequent, with other thyroid pathologies, helps to take for granted acute febrile thyroiditis as a possible complication of gallbladder thyroid cancer. The prognosis remains favourable in this context if only the patient is taken care of very quickly with an adapted medication.

#### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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