



THYROIDITIS

WHAT IS THE STUDY ABOUT?

Subacute thyroiditis (SAT) is a self-limited inflammatory disorder of the thyroid. This is a study aimed at further documenting the clinical characteristics of the disorder based on laboratory and imaging studies before treatment.

THE FULL ARTICLE TITLE: Nishihara E, Ohye H, Amino N, Takata K, Arishima T, Kudo T, Ito M, Kubota S, Fukata S, Miyauchi A. Clinical characteristics of 852 patients with subacute thyroiditis before treatment. *Intern Med* 2008;47:725-9.
<http://www.ncbi.nlm.nih.gov/pubmed/18421188?dopt=Citation>

WHAT IS KNOWN ABOUT THE PROBLEM BEING STUDIED?

SAT is a self-limiting inflammatory disorder of the thyroid. It is the most common cause of painful thyroid and may account for up to 5% of clinical thyroid abnormalities. This is a study aimed at further documenting the clinical characteristics of the disorder based on laboratory and imaging studies before treatment.

WHAT WAS THE AIM OF THE STUDY?

The aim of the study was to document the laboratory and clinical features of SAT.

WHO WAS STUDIED?

The subjects are 852 patients with SAT who were cared for at the Thyroid Clinic at Kuma Hospital in Japan from 1996 to 2004. The diagnosis was based on clinical features of thyroid swelling, pain and tenderness and an elevated C-reactive protein (CRP) and elevated serum free thyroxine (FT₄) and decreased serum thyrotropin (TSH) or suppressed 24-hour radioiodine uptake (RAIU), negative or weakly positive serum anti-thyroid antibodies, and an ultrasound hypoechoic area in a region of thyroid tenderness.

HOW WAS THE STUDY DONE?

The onset of SAT was defined as the time at which thyroid pain and tenderness developed. Serum levels of aspartate aminotransferase (AST), alanine aminotransferase (ALT) and CRP were also measured. To evaluate the acute phase of SAT before treatment, laboratory and imaging studies were divided into three groups: <7 days, 30±5 days and >60 days.

WHAT WERE THE RESULTS OF THE STUDY?

The monthly distribution during which SAT occurred clustered mainly from summer to early autumn. In all, 68% of the patients developed unilateral or bilateral neck pain at the onset, and 23% experienced nasal discharge, cough and sputum within 1 month before the onset of SAT, and 28% had temperatures >38°C (100.4°F). A total of 62% of the patients developed typical

symptoms of thyrotoxicosis, including palpitations, increased sweating, and weight loss. Within 1 month of the onset of SAT, the serum TSH and ALT declined significantly (<0.05), compared with TSH and ALT levels measured within 7 days of onset, and were clearly different in the three time periods. The other laboratory tests did not change significantly. Nine patients (1.6%) in the cohort had episodes of recurrent SAT with an interval of 13±5.6 years between the first and second episodes. Ultrasound examination showed that half of the patients with unilateral thyroid pain presented with bilateral hypoechoic area in the thyroid and the rate of bilateral hypoechoic area tended to increase 2 months after onset.

HOW DOES THIS COMPARE WITH OTHER STUDIES?

The results of this study are comparable to other studies, although most other reviews recommend glucocorticoid or nonsteroidal anti-inflammatory therapy.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The principle finding in this study is that few abnormal laboratory tests occur in the first 30 days following the initial manifestations of SAT, with the exception of serum TSH levels, which are significantly suppressed within 30 days of the initial symptoms of SAT, and remained suppressed for more than 60 days. Before treatment, most of the abnormal laboratory findings associated with thyrotoxicosis, inflammation, and liver dysfunction reached peak levels within 1 week after onset.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Serum TSH levels are significantly lower within 30 days after the onset of subacute thyroiditis but other routine laboratory tests show little change.

ABBREVIATIONS & DEFINITIONS

TSH is thyroid stimulating hormone, a pituitary tumor that stimulates the thyroid gland. It rises when the thyroid fails to make sufficient thyroid hormone and declines when thyroid hormone secretion is low

AST (aspartate aminotransferase) is a blood test that rises with liver damage

ALT (alanine amino transferase) is a blood test that rises with liver damage

FT₄ is one of the thyroid hormones circulating in the blood stream

CRP is C-reactive protein, which rises in the blood stream when inflammation occurs