

# A Case of Thyrotoxicosis with Leukopenia

Muthukrishnan J, A Verma, Modi KD, Dept Of Endocrinology & Metabolism, Medwin Hospitals, Hyderabad

## Clinical Data

19yr old girl  
Fever x 2 months, (100 – 101°F)  
Anorexia, weight loss, breathlessness  
Insomnia, palpitations, tremulousness

Similar Symptoms – 5yrs back,  
Diagnosed as Hyperthyroidism  
Antithyroid drugs – 1 yr, discontinued herself

Rx  
Empirical Cefotaxime, Ofloxacin  
Antimalarial – Arteether  
Antipyretic - Paracetamol

Off all drugs except Paracetamol for 5 days prior to hospitalisation

## Examination

Pulse 110/min, BP 130/70mmHg,  
Temp 101°F Diffuse goiter(Gd II)  
Fine tremors, No Eye signs  
Rt axillary LN (1.5 cm),  
Hepatosplenomegaly

## Investigations

Hb 12.2 g/dl, TLC – 2000/ul,  
Platelet 1.5 lakhs/cc  
PBS – normocytic/  
normochromic, no blasts  
ESR – 10mm 1st hr  
Blood / Urine Culture – sterile  
Antinuclear Antibody - Negative

Chest X Ray – Normal

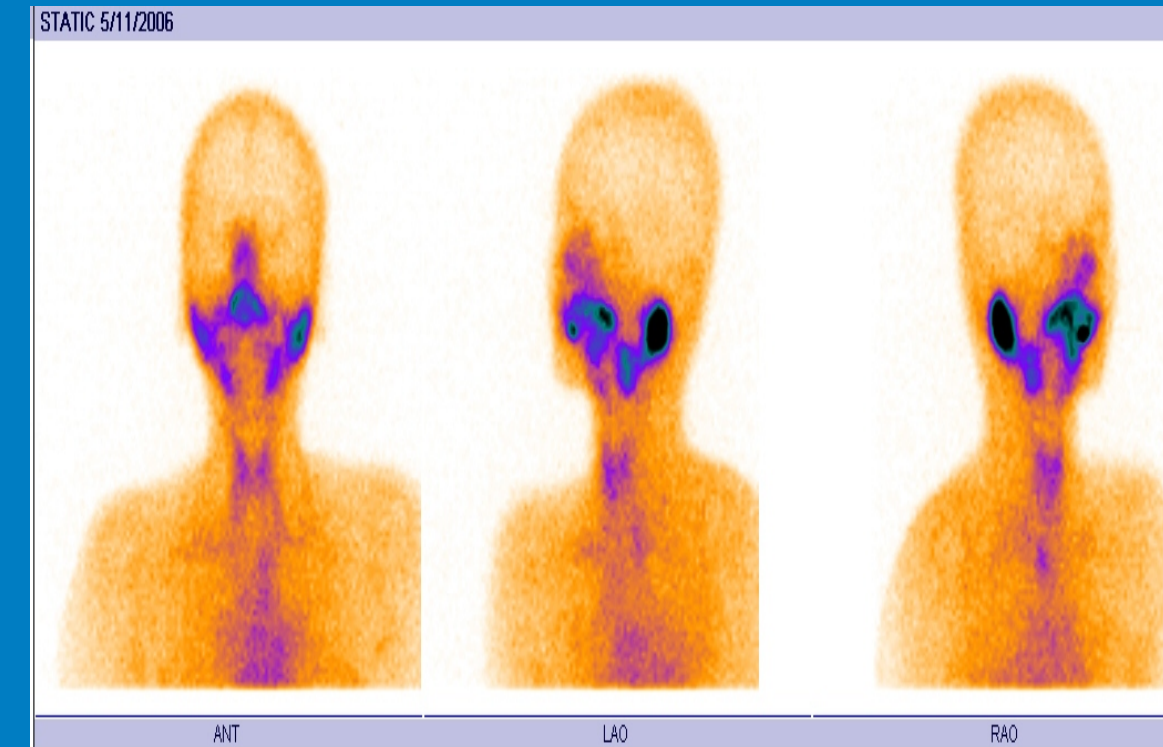
USG Abd/Pelvis – Splenomegaly (mild)

FNAC LN – Reactive hyperplasia

Bone Marrow Aspiration/Biopsy – mildly hypocellular, normoblastic maturation

## Thyroid Evaluation

TSH <0.1uIU/ml,  
T4 25 ug/ml  
T3 1.9ng/ml  
Tc 99m Pertechnate  
Thyroid Scan: Low uptake  
Thyroid Microsomal Antibody: positive



## Treatment

Empirical Antibiotics  
Tab Carbimazole 20 mg BD  
Close watch for deterioration  
Daily Leukocyte counts

## Follow Up

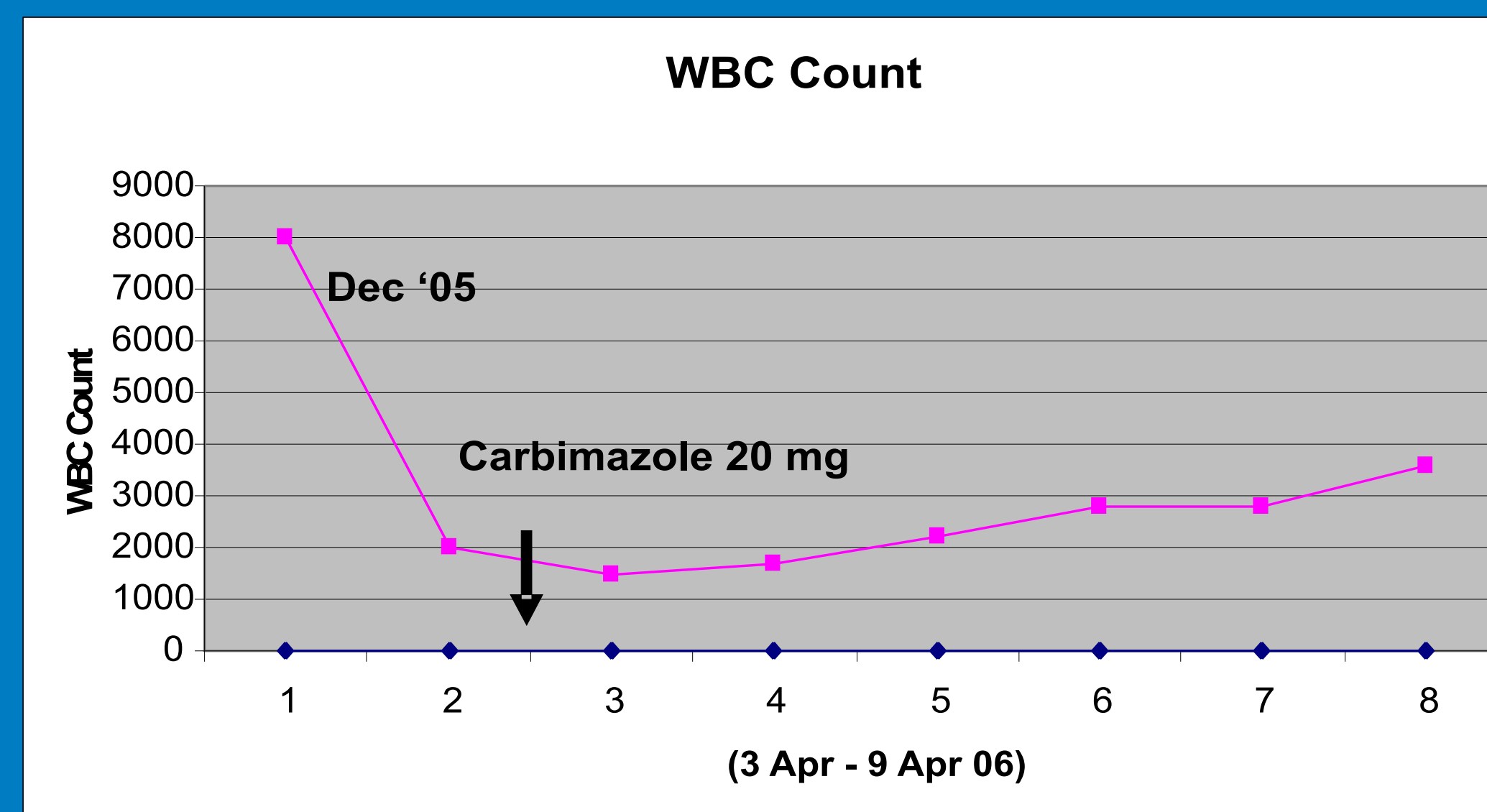
### In Hospital

Subjectively better  
Afebrile in 48 hrs  
Weight gain 2kg in 4days

### After 4 wks

Asymptomatic  
Weight gain : 3 Kg  
Total WBC Count : 4,500 / cc  
TSH : 0.3 mIU/l

## WBC Count Profile



## Thyrotoxicosis with Cytopenia

Leukopenia  
Neutropenia, relative Lymphocytosis  
Thrombocytopenia  
Immune mediated cytopenia  
Anti-neutrophil antibodies, Anti platelet antibodies  
Low G-CSF levels

## Diagnostic Dilemma

AutoImmune Thyroiditis  
Cytopenia ?

? Undiagnosed Viral/Bacterial Infection

Effect of AutoImmune Thyroid Disease

## Conclusion

Thyrotoxicosis, Fever, Leucopenia  
No apparent underlying cause

A Therapeutic dilemma

Leucopenia, fever improved after starting anti thyroid drugs

AutoImmune Thyroid Disease & Leucopenia, a known entity described in Literature