Guideline

Tuberculosis - Minimising the risk of Tuberculosis in patients starting Anti TNF Inhibitors

Summary	Guideline to reduce the risk of Tuberculosis disease in patients starting anti-TNF Inhibitors
Document type	Guideline
Document number	GL2008_007
Publication date	07 April 2008
Author branch	Communicable Diseases
Branch contact	9391 9277
Review date	30 June 2019
Policy manual	Not applicable
File number	04/5852
Previous reference	N/A
Status	Review
Functional group	Clinical/Patient Services - Infectious Diseases, Medical Treatment Population Health - Communicable Diseases
Applies to	Area Health Services/Chief Executive Governed Statutory Health Corporation, Board Governed Statutory Health Corporations, Affiliated Health Organisations, Affiliated Health Organisations - Declared, Public Health System Support Division, Community Health Centres, Divisions of General Practice, Government Medical Officers, Public Hospitals
Distributed to	Public Health System, Community Health Centres, Divisions of General Practice, Government Medical Officers, NSW Ambulance Service, Ministry of Health, Public Health Units, Public Hospitals, Private Hospitals and Day Procedure Centres
Audience	Administration;k clinical;allied health;nursing

TUBERCULOSIS – MINIMISING THE RISK OF TUBERCULOSIS IN PATIENTS STARTING ANTI TNF INHIBITORS

This Guideline is to be read in conjunction with the following Policy Directives:

PD2005_071 *Chemotherapy*
PD2005_072 *Preventive therapy*
PD2008_019 *Tuberculosis - Principles for management of people with Tuberculosis in NSW*
PD2008_016 *Tuberculin Skin Testing*

Introduction

Tumor necrosis factor (TNF) is a proinflammatory cytokine which has a pivotal role in the pathogenesis of several autoimmune diseases, including rheumatoid arthritis and other inflammatory joint disease, psoriasis, and inflammatory bowel disease.

Three anti-TNF α agents are now available in Australia (infliximab, etanercept, and adalimumab) to treat selected autoimmune diseases. However, TNF α is a significant component of the human immune response to infection[i], and treatment with anti-TNF α agents is associated with an increased risk of infection. The development of active Tuberculosis (TB) disease has occurred in some patients who have received anti-TNF α therapy in countries with high TB prevalence[ii].

The following guidelines have been developed to reduce the risk of active TB developing in patients receiving anti-TNF α therapy.

Before starting ANTI-TNF α inhibitors all patients should have:

1. A careful review of their history of exposure to TB, and an assessment to exclude active TB

2. A baseline Tuberculin Skin Test for evidence of TB infection[a]

3. A Chest X ray to exclude active TB and assess evidence of past or current TB

Latent Tuberculosis

Patients with evidence of latent tuberculosis infection (LTBI) who have not previously received effective treatment for TB and in whom active TB is excluded should be treated with isoniazid (5mg/kg to maximum of 300 mg/day) and pyridoxine (25mg/day) for a period of 9 months[iii]. The first month of isoniazid treatment should be completed prior to starting an anti-TNF α inhibitor. Evidence of LTBI may include:

[a] Footnote: While a positive IGRA is good evidence for Latent TB infection a negative IGRA may not exclude TB. Careful consideration must always be used when interpreting TB screening results.

1. TST ≥ 5 mm
2. Radiological evidence of past TB

Patients with chest x-ray abnormalities, cough or other clinical features suggestive of active TB should have sputum examined for AFBs before commencing treatment with isoniazid. Those found to have active TB should have full treatment as outlined in Policy Directive PD2005_071 *TB Chemotherapy.*

Physicians should include the risk of potential adverse effects of isoniazid therapy in their assessment of the overall risk of commencing treatment with an anti-TNF α inhibitor.

Monitoring of isoniazid therapy*,* patients on isoniazid preventive therapy should have monthly assessment of:

- their hepatic function
- their compliance with the prescribed medication, and
- the development of TB.

Treatment of TB

Where active TB is diagnosed in a person receiving anti-TNF α therapy:

- cease anti-TNF α inhibitor
- reduce other immunosuppressants to lowest possible effective dose.

Patients with active TB should be referred to a NSW Chest Clinic for management and treatment of TB. Treatment should be in accordance with NSW Health TB treatment guidelines, see Policy Directive PD2005_071 *TB Chemotherapy.*

Professor Debora Picone AM
Director-General

References

1. Atkinson YH et al (1988) Recombinant human tumour necrosis factor-alpha. Regulation of N-formylmethionyl-leucylphenylalanine receptor affinity and function in human neutrophils. *J Clin Invest,* 81; 759 – 765

2. Gomez-Reino JJ et al (2003)Treatment of rheumatoid arthritis with tumour necrosis factors inhibitors may predispose to significant increase in tuberculosis risk. *Arthritis & Rheumatism*, 48; 2122 – 2127

3. Carmona L et al (2005) Effectiveness of recommendations to prevent reactivation of latent tuberculosis infection in patients treated with tumour necrosis factors antagonists. *Arthritis & Rheumatism*, 52; 1766 - 1772