INFLIXIMAB INFUSION: ADMINISTRATION AND MANAGEMENT

PRACTICE GUIDELINE ©

DOCUMENT SUMMARY/KEY POINTS

- Infliximab is a chimeric anti-tumour necrosis factor antibody approved by the Therapeutic Goods Administration (TGA) for use in refractory Crohn's disease. Prescribing is restricted to Gastroenterologists for:
  - Treatment of moderate to severely active Crohn's disease in children who have had an inadequate response to conventional therapy
  - Treatment of children with severe fistulizing Crohn's disease who have not responded adequately to conventional therapy
  - Maximum dose: 10 mg/kg (decisions are made in consultation with the Gastroenterologist).

CHANGE SUMMARY

- Form removed from this document.
- Link created to the new form available on the Gastroenterology intranet site.

READ ACKNOWLEDGEMENT

- Medical and nursing staff who care for patients being treated with infliximab are required to read and acknowledge the document.

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

Approved by:	SCHN Policy, Procedure & Guideline Committee	CHW Drug Committee June 2012
Date Effective:	1st August 2012	**Review Period**: Annual
Team Leader:	Gastroenterologist	**Area/Dept**: Gastroenterology

TABLE OF CONTENTS

Introduction

Tumour necrosis factor (TNF) is an important cytokine in intestinal inflammation. Controlled trials using the chimeric anti-TNF antibody Infliximab have shown its efficacy in refractory Crohn's disease.

Remicade® is the trade name for Infliximab. It is distributed in Australia by Schering-Plough. Prescribing is restricted to Gastroenterologists. The Pharmacy Department will need to be notified prior to the intended use as stocks need to be ordered on an individual patient basis. Infliximab should not normally be required or administered outside of business hours (Mon-Fri; 0800-1700).

Infliximab is available in single-use 100 mg vials as a sterile white lyophilised powder for intravenous (IV) injection. Each vial is reconstituted with sterile water for injection and the total dose then diluted to 250mL with 0.9% sodium chloride and given as an intravenous infusion (the final concentration should be between 0.4 – 4mg/mL[1]). The half-life of a dose of 5 mg/kg is 9 days.

Indications for Use (as indicated by the TGA)

- Treatment of moderate to severely active Crohn's disease in children who have had an inadequate response to conventional therapy.
  - An **initial infusion** of 5 mg/kg (week 0), followed by two repeat 5 mg/kg infusions at week 2 and week 6. Infusions may then be given at 8 weekly intervals until week 46 (ie maximum of 8 infusions).
- Treatment of children with severe fistulizing Crohn's disease who have not responded adequately to conventional therapy.
  - An **initial infusion** of 5 mg/kg (week 0), followed by two repeat 5 mg/kg infusions at week 2 and week 6. Infusions may then be given at 8 weekly intervals until week 46 (ie maximum of 8 infusions).

Before Commencing the Infusion

- The family will have been counselled regarding the risks and benefits of this treatment by the attending Gastroenterologist.
- The child will be admitted by the Gastroenterology staff and current disease activity documented clinically as well as completing the Paediatric Crohn's Disease Activity Index form.
- A workup for TB (chest x-ray) will be performed as appropriate.
- Laboratory investigations must include: FBC, EUC, Albumin, LFT's, ESR, CRP, ANA, and dsDNA.

- **Observations** should be undertaken to establish a baseline reading to detect any reactions to the infliximab: temperature, pulse, respirations, blood pressure and oxygen saturation should be performed. These should be attended immediately prior to the administration of the Infliximab.
- A pre-medication of intravenous corticosteroid (methylprednisolone 2 mg/kg to a maximum of 40 mg) is administered. This may in addition include antihistamines and paracetamol if a previous reaction has been documented in this patient.

Administration

1. **Dosage:** 5 mg/kg as an intravenous infusion over a minimum of 2 hours.
2. **Maximum Dose:** 10 mg/kg (dose decisions are made in consultation with the Gastroenterologist).
3. Reconstitute each 100-mg vial of Infliximab with 10mL of sterile water for injection. **Gently swirl** the solution to dissolve the powder: **DO NOT SHAKE**. Allow the vial to stand for 5 minutes.
4. Dilute the prescribed dose of the reconstituted solution to 250mL with 0.9% sodium chloride.
5. Administer the infusion over a minimum of 2 hours using an IV giving set and low protein binding filter.
6. Do not infuse concomitantly with other products in the same intravenous line.

Precautions & Observations

- Ensure resuscitation equipment and medication available (adrenaline, antihistamine and IV hydrocortisone) prior to administering the drug.
- Close monitoring of the patient should occur during the infusion and for 2 hours post infusion – this includes checking and documenting:
- Pulse, BP, Respiratory Rate – every 15 minutes for first 60 minutes.
- Pulse, BP, Respiratory rate every 30 minutes for remainder and 2 hours post completion of the infusion.
- Hourly temperature.
- Continuous pulse oximetry.
- The resident medical officer is NOT required to stay in the clinical area during the infusion.

Adverse Reactions

Due to the release of cytokines the following reactions may occur in 5% of patients treated:

- Fever
- Chills
- Pruritus
- Urticaria
- Dyspnoea
- Hypertension
- Hypotension
- Chest pain

Suggested Equipment

- Infliximab 100 mg vial
- Water for injection (WFI)10mL
- 19 gauge needle
- 10mL syringe
- 250mL bag of 0.9% normal saline
- line and burette
- 0.2 micron low protein binding filter

Form

Paediatric Crohn's Disease Activity Index:

(located on the Gastroenterology Intranet site)

- http://intranet.kids/ou/gastroenterology/resources/paediatric_crohns-disease-activity-index_form.pdf

On the patients admission for Infliximab Infusion, Medical staff must print & complete the form and then forward it to Gastroenterology Department where a copy will be kept for reference and the original send to Medicare Australia when requesting permission to continue prescribing this medication.

References

1. MIMS. (2006). Remicade Drug information.
2. Hanauer SB et al, Maintenance infliximab for Crohn's disease: the ACCENT 1 randomised trial. Lancet 2002; 359:1541-9.
3. Baert F et al, Influence of immunogenicity on the long-term efficacy of infliximab in Crohn's disease. N Engl J Med 2003; 348(7):601-608.
4. Farrell RJ et al, Intravenous hydrocortisone premedication reduces antibodies to infliximab in Crohn's disease: a randomised controlled trial. Gastroenterol 2003; 124(4):917-924.
5. Rutgeerts P et al, Comparison of scheduled and episodic treatment strategies of Infliximab in Crohn's disease. Gastroenterology 2004; 126(2):402-13.
6. Sartor RB. Episodic retreatment versus scheduled maintenance therapy of Crohn's disease with Infliximab: not so far apart. Gastroenterol 2004; 126(2):598-601.