

## 12

# Key Facts about Infusion Reactions with Biologics

by Kelly Young

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**Editor's Note:** We'd like to thank Kelly for allowing us to reprint her article in Spondylitis Plus. Our Medical and Scientific Advisory Board would like to preface the article with the following: Some patients with ankylosing spondylitis are treated with a medication called infliximab or Remicade, which is given through the vein. This can be a very effective medication, but like all forms of therapy, it has risks. When medications are given by vein, allergic-type reactions can occur. Fortunately, these are very rare. The recent meeting of the American College of Rheumatology had an excellent discussion of this occasional problem. Patients who are receiving infliximab might enjoy the following information.

## An infusion nurse talks about safety with Biologics

One practical session at the 2012 American College of Rheumatology (ACR) Scientific Meeting was a short talk on preventing infusion reactions presented by a nurse from Seattle, Christine Elliot. Ms. Elliot has supervised 15,000 rheumatological infusions in over a decade as an infusion nurse. She offered an overview of infusion reaction safety and shared insights she has gained from her extensive experience.

Biologics are often prescribed for moderate to severe Rheumatoid Arthritis (Rheumatoid Disease) [as well as forms of spondyloarthritis] when response to disease modifying drugs (DMARDs) is insufficient. In the U.S., four different biologic treatments are administered via IV infusion: infliximab (Remicade), rituximab (Rituxan), abatacept (Orencia), and tocilizumab (Actemra). For many people with Rheumatoid disease, infusions become a regular part of life.



**“Remember: Severe reactions are rare. Your best protection is being an informed patient and having good communication with a skilled nurse”**



### **1 What is an infusion reaction?**

According to Elliot, an infusion reaction includes any signs or symptoms experienced by a patient during the infusion of pharmacologic or biologic agents or any events occurring on the first day of drug administration. Infusion reactions can be acute (occurring within two hours of infusion) or delayed (occurring up to 14 days after an infusion). The most common indicators are rash, flushing, change in blood pressure, or a “tickle in the throat.”

### **2 Management of a mild infusion reaction**

Most infusion reactions are mild with symptoms such as headache, nausea, or dizziness. Stopping the infusion of the drug is usually sufficient to treat mild reactions. However, it is important to keep the IV intact in order to continue to provide saline to the patient for hydration or in case other IV medication is required. In most cases, infusion reactions resolve at this point.

### **3 Managing a moderate infusion reaction**

Further signs of an infusion reaction include back pain, chills, nausea, joint aches, fever, and fatigue. Obviously, it is important that a patient and the nurse distinguish these as changes from usual Rheumatoid symptoms. Treatment is the same as with a mild reaction, except that medication may be given to treat the symptoms: usually 25-50 mg of diphenhydramine, 500-650 mg acetaminophen, or a dose of hydrocortisone pushed via the IV.

### **4 Dealing with a severe infusion reaction**

Severe infusion reactions are rare. Symptoms include hypo or hypertension (a 40 mm degree difference in blood pressure), angioedema, wheezing, or stridor. Treatment is the same with care to maintain the airway and the possible use of oxygen or epinephrine to treat anaphylaxis. Cardiac arrest is extremely rare and Ms. Elliot has never seen this in a rheumatology patient.

### **7 more take-aways for patients about infusion reactions**

- 5** Prompt intervention is important and may prevent a more serious reaction.
- 6** Medication is not always needed. Stopping the infusion or slowing the infusion rate is often sufficient, along with adequate hydration. Elliot said to keep the saline IV “wide open.”
- 7** Any time off of a drug increases the chance of having an infusion reaction.
- 8** Always maintain the IV in case it is needed to treat the reaction.
- 9** Rule of twos: reactions usually begin between 2 minutes and 2 hours of beginning an infusion.
- 10** It helps if the nurse communicates well with the patient in order to recognize a reaction early and distinguish it from anxiety, hunger, pain, or other distress.
- 11** Re-challenging: a decision to try the drug again must be made on a case-by-case basis.
- 12** A tickle in the throat, a final note

Elliot mentioned that in her research she had never seen any literature about the throat tickle symptom, but that it occurs frequently with rituximab. *And only with rituximab.* I did have this symptom during some of my Rituxan infusions and I can tell you it feels like a cold virus is coming on. I’m not sure why it has not been better documented since its common and a clear sign to slow the infusion rate.