Service Priorities and Programmes

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Impact of Rheumatology Nurse Clinic on Ankylosing Spondylitis Patients Follow-up Intervals and Rheumatology Specialist Clinic Workload

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Introduction

Ankylosing spondylitis (AS) is a chronic inflammatory condition affecting spines, large joints and entheses (ligament attachments to bones) predominantly in young males. Patients experience significant spinal pain, morning stiffness, sleep problem and functional impairments such as problem in bending back, difficulty to pick up objects on the floor and walk up and downstairs. Conventional treatments are exercise, physiotherapy and non-steroidal anti-inflammatory drugs. Treatment had been unsatisfactory until a decade ago when biologics targeted on tumour necrosis factor (TNF) alpha molecule appeared. TNF inhibitors (TNFi) have been shown to damp down inflammation in those affected sites and inflammatory markers as measured in the blood, as well as to improve pain, stiffness and function. However, all TNFi are injectable. Either patients are scheduled to be admitted to day ward for intravenous infusion according to a protocolised intervals, or they have injection of subcutaneous formulations first taught and supervised by rheumatology nurses and later perform self injections. Moreover, in rheumatology nurse clinics, patients are screened for latent tuberculosis (with skin test and chest radiograph ordered by doctor), heart disease (symptoms and electrocardiogram) and chronic hepatitis carrier state (blood tests ordered by doctor). TNFi suppress immunity and there is a potential risk of infection. Therefore, all patients are also taught by rheumatology nurses to be aware of infection and to delay regular injection of TNFi until infection is cleared up. Queen Elizabeth Hospital rheumatology specialty nurse clinic was in full function since 1st October 2012. AS patients seen in rheumatology specialist clinic are referred to rheumatology specialty nurse clinic for biologics screening, supervision and teaching of self injections, and co-follow up for drug efficacy and potential side effects e.g. infection. We postulated that nurse clinic can help patients to be more often monitored by doctors and/or nurses, and also to help share some of the follow-up workload in specialist clinic.

Objectives

To evaluate the rheumatology specialist clinic follow-up frequencies and intervals of AS patients on subcutaneous TNFi before and after rheumatology specialty nurse clinic was set up

Methodology

A retrospective survey was conducted to evaluate the rheumatology specialist clinic follow-up frequencies and intervals of AS patients on subcutaneous TNFi two years before (Group A) and two years after (Group B) full functioning of rheumatology specialty nurse clinic, i.e. from 1st October 2010 to 30th September 2012 and 1st October 2012 to 30th September 2014 respectively. Patients and follow-up dates were traced from our local patient registry and Clinical Management System. All values are expressed as mean ± standard deviation. Mann-Whitney U test is used to compared intervals and number of follow up in the two groups. Statistical significance is set at $p<0.05$ two-sided. Statistical package SPSS 20.0 is used.

Result

For Group A (n=47), patients were followed up in rheumatology specialist clinic 5.2±1.9 times per year at an average 13.4±3.8 weeks apart. For Group B (n=38), patients were followed up alternately in specialist clinic and nurse clinic at an overall average interval of 10.4±3.5 weeks, which is three weeks shorter than before ($p<0.001$). On the other hand, the patients were attending doctor's clinic less often at 3.5±1.3 times per year (1.7 times per year less, $p<0.001$) and an average of 21.4±3.8 weeks apart (eight weeks longer, $p<0.001$). They also attended nurse clinic 3.8±1.6 times per year. Conclusion: Rheumatology nurse clinic is able to provide patient monitoring for efficacy and side effects more often and at a shorter interval. As a result, doctors' specialist clinic follow-up can be reduced and significant workload shared out. Future surveys can focus on other rheumatic diseases, quality of care and patient satisfaction.