



Service Priorities and Programmes
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Pattern of Hypersensitivity reactions to Asparaginase in Adult Haematology Patients at Queen Mary Hospital

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Introduction

Asparaginase is an enzyme used as part of treatment in acute lymphoblastic leukaemia (ALL), acute myeloid leukaemia (AML) and non- Hodgkins' lymphoma (NHL). However, one of the main concerns of using Asparaginase is its hypersensitivity or anaphylactic reaction, and approximately 25% of adult hematologic patients had received this medication that had experienced some kind of hypersensitive response at Queen Mary Hospital (QMH) in the past 5 years. Aim of this investigation is to analyse the allergy pattern of Asparaginase that occurred in this group of patient and potentially derive precaution measure when using this medication to minimise the risk of hypersensitivity reaction.

Objectives

1. To identify the pattern of allergic/ hypersensitive reaction to Asparaginase in order to understand the possible cumulative incidence of such hypersensitivity and potential risk factors
2. To categorise the type of allergy

Methodology

Patient who received Erwinase during Jan 2012 to Dec 2017 will be included in this study, which represented the group of adult patients who had allergic reaction to Asparaginase. A retrospective review of electronic medical records was conducted to identify the number of cycle which hypersensitivity reaction occurred. The grading and type of allergy was reviewed using electronic medical records and nursing documentation.

Result

Result: Total 35 patients were prescribed Erwinase during Jan 2012 to Dec 2017, 11 and 14 patients received Erwinase at their Cycle 2 and 3 treatments respectively; 9 patients treated with Erwinase at their cycle 1, 4 and 5; 1 patient received Erwinase at cycle 6. Three patients received Erwinase who experienced Grade 2 skin reaction on subsequent cycle but tolerated with prolonged infusion to 4 hours and Dexamethasone 10mg as pre-medication

Conclusion: Hypersensitivity reactions to Asparaginase (Leunase) are subsided after

discontinuation of treatment and onset mostly after Cycle 1 or 2. These patients are generally tolerated well after switch to Erwinase. For patients who have hypersensitivity to Erwinase, prolonging infusion and increase steroid dose will usually suffice. Implementation of desensitization protocol can be considered to allow patient to continue receiving effective treatment.