Background

Allergic Rhinitis (AR) affects more than 20% of the population in the UK and Western Europe and represents a major cause of morbidity that includes interference with activities of daily living and impairment of sleep quality.

This guideline is specifically for immunotherapy for grass allergy and is for the management of AR in children that have failed to achieve adequate relief of symptoms despite maximal medical therapy. It is not appropriate for the majority of patients with hay fever.

Allergen immunotherapy involves the repeated administration of allergen extracts with the aim of reducing symptoms on subsequent allergen exposure, improving quality of life and inducing long-term tolerance and a reduction in medications required regularly.

Patient Selection

Children will be identified in the specialist paediatric allergy clinics and Grazax only be given to patients who have been identified and reviewed by either Dr Traves or Dr Starkey, the consultants who run these clinics. Patients in general paediatric clinics will not be eligible for SLIT/Grazax and must be reviewed in the allergy clinic before consideration of starting treatment. Children must be over 5 years of age and have a documented grass allergy with positive skin prick tests to grass or positive Specific IgE blood tests to grass/timothy grass.

Patients who are eligible for SLIT should fulfil the following requirements and be on maximal treatment for allergic rhinitis:

- Patient over the age of 5 years
- Documented seasonal allergic rhinitis
  - Symptoms include 2 or more symptoms for >1 hours on most days
    - Profuse nasal discharge (watery)
    - Nasal obstruction
    - Sneezing
    - Nasal pruritis
    - Conjunctivitis

Patients need to be on Maximal Medical Treatment (MMT) for at least one season prior to assessment for possible immunotherapy. MMT would be as follows:

1. Allergen and irritant avoidance measures
2. Intranasal steroids e.g. trial with at least two of the following for one season:
   
   **Check efficacy at 4-6 weeks, if ineffective consider changing to alternative spray**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Strength</th>
<th>Dose as per BNFc</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beclometasone</td>
<td>50micrograms/metered spray</td>
<td>Child &gt; 6 years 2 sprays into each nostril twice daily; max. total 400micrograms (8 sprays) daily</td>
<td>1st line option</td>
</tr>
<tr>
<td>Mometasone</td>
<td>50micrograms/metered spray</td>
<td>Children &gt;3 years 2 sprays into each nostril once daily, increased if necessary to 4 sprays into each nostril once daily.</td>
<td>1st line option</td>
</tr>
<tr>
<td>Budesonide (Rhinocort aqua)</td>
<td>64micrograms/metered spray</td>
<td>Child &gt; 12 years 2 sprays into each nostril once daily in the morning or 1 spray into each nostril twice daily</td>
<td>2nd line option</td>
</tr>
</tbody>
</table>
| Fluticasone furoate (Avamys)  | 27.5micrograms/metered spray               | Child 6-12 years 1 spray into each nostril once daily, increased if necessary to 2 sprays into each nostril once daily  
Child 12-18 years 2 sprays into each nostril once daily | 2nd line option     |

3. Oral antihistamines:

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose as per BNFc</th>
<th>GP to prescribe prior to referral*</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Cetirizine 10mg tablets or 5mg/5ml oral solution | Child 2-6 years 2.5mg twice daily  
Child 6-12 years 5mg twice daily  
Child 12-18 years 10mg once daily | 2.5mg can be given up to three times daily  
5mg can be given up to three times daily  
10mg can be given two to three times daily | Paediatric allergy clinic patients might be titrated to four times a day dosing by the consultant |
| Loratadine 10mg tablets or 5mg/5ml syrup | Child 2-12 years  
Body-weight under 30kg 5mg once daily  
Body-weight over 30kg 10mg once daily  
Child 12-18 years 10mg once daily | Dose as per age & body-weight can be given twice daily |                              |

*off-license dosing as recommended by consultants

4. Montelukast

<table>
<thead>
<tr>
<th>Age</th>
<th>Dose as per BNFc</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>Child 6 months-6 years</td>
<td>4mg once daily in the evening</td>
<td>Doses for prophylaxis of asthma but consultants support the use of montelukast off-license for allergic rhinitis</td>
</tr>
<tr>
<td>Child 6-15 years</td>
<td>5mg once daily in the evening</td>
<td></td>
</tr>
<tr>
<td>Child 15-18 years</td>
<td>10mg once daily in the evening</td>
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</table>

5. If eye symptoms are significant (fluticasone furoate nasal spray would be the most appropriate nasal spray in these patients as it has a good effect on eye symptoms):

<table>
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<tbody>
<tr>
<td>Sodium cromoglicate</td>
<td>2% eye drops</td>
<td>1 drop into each eye four times daily</td>
<td>purchased over the counter (&gt;6years of age)</td>
</tr>
</tbody>
</table>
| Olopatadine                   | 1mg/ml eye drops                           | Child 3-18 years 1 drop into each eye twice daily   | Max. duration of treatment 4 months  
Consultants advise greater than 4 months may be needed dependant on length of season |

Failed MMT is defined as persistent moderate to severe symptoms using ARIA guidelines. ARIA guidelines were developed in the US and are used worldwide. They are accepted by the British Society of Allergy and Clinical Immunology as the most up to date and evidence based guidelines on managing Allergic rhinitis in adults and children see [here](#) for further information.
Patient Referral Process:
Once patients have completed a full season on Maximal Medical Therapy as noted above, they can be directly referred to the Paediatric Allergy Clinic. There is no need to undertake Blood/ Specific IgE (previously known as RAST) tests before referral as long as the history and symptoms are compatible with Allergic Rhinitis. Skin Prick testing and bloods if needed will be done in clinic.

The following tick box can be used for ensuring referrals are appropriate:
- Age over 5 years
- Documented Allergic Rhinitis Symptoms

Treatment (for one season)
- Nasal steroid spray (max dose)
- Maximum off-license daily dose antihistamines
- Montelukast (Daily)
- Eye drops if eye symptoms significant
- Ongoing symptoms despite above treatment

How does the programme work
Once the child has been identified and wishes to proceed, patient information is to be given to the family and consent taken. The patient will be prescribed the medicine (Grazax) on an outpatient prescription and will bring this with them to Puffin day-case for the first dose of medication to be administered under supervision in hospital.

Once the patient has been started on Grazax, they will receive prescriptions from the hospital for ongoing treatment and be reviewed in clinic regularly (expected to be on a 3 monthly basis). It is expected that the patients will receive treatment for a total of 3 years to obtain full benefit, although this will be reviewed in each patient on a yearly basis to assess response to treatment and the benefit of continuing.

It is expected that patients will have a significant reduction in symptoms of allergic rhinitis after the first year of treatment and that their regular medication requirements will be reduced each year. SLIT does not cure the patient of their condition and there may still be some ongoing symptoms but these are hoped to be much more manageable and have significantly less impact on daily life.

What are the possible side effects?
Grass SLIT commonly causes local irritation, oral itching and hay fever type symptoms. True anaphylaxis is rare.

How to contact?
If you have any questions please contact Dr Traves or Dr Starkey on (01332) 786441 or 786826

<table>
<thead>
<tr>
<th>Document updates</th>
<th>Date updated</th>
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</thead>
<tbody>
<tr>
<td>Iodoxamide eye drops added; Sodium cromoglicate eye drops can be purchased</td>
<td>Sept 2018</td>
</tr>
<tr>
<td>Lodoxamide eye drops removed as olopatadine supply issue resolved</td>
<td>February 2019</td>
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