Impact of bee-venom allergy and immunotherapy on the QOL of patients and their care-givers

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Hymenoptera Allergy

- Allergy is common
- Morbidity and mortality rates are low [1,2]

- Bee venom allergy important in South Africa
  - High prevalence of bees
  - Aggressive behaviour of the African honey bee, or *Apis mellifera* [3]
Bee Venom Allergy

- Contributes significantly to morbidity and has a negative effect on health-related quality-of-life [4]
Immunotherapy

- 95% protection from anaphylaxis due to future insect stings. (Golden et. al.)

- Knowledge that, after completion of IT, anaphylaxis due to a bee sting is thwarted, improves HRQL.

- Currently about 300 patients in South Africa are on bee venom Subcutaneous Immunotherapy (SIT)

- SIT is recommended for 3-5 years for Hymenoptera vaccines.
Immunotherapy Patients at UCT Lung Institute
Allergy Unit 2010

Number of patients

Age Category (years)

<19 19-29 30-39 40-59 >60

Female Male
Bee Venom Immunotherapy Patients at UCT Lung Institute Allergy Unit 2010

Number of patients

Age Category (years)

Male
Female
Age of Patients <19 years at Date of Consultation

Age (years)

Number of patients

Male
Female

Bee
Proportion of Allergens Amongst Immunotherapy Patients at UCT Lung Institute Allergy Unit 2010

- HDM: 65
- Grass Mix: 42
- Bee: 31
- Dog: 2
- Mould: 1
- Horse: 1
- Cat: 3
- HDM & Grass: 2
- Pollen: 1
- HDM & Cat: 2
Aim of Study

To assess the impact of bee allergy on the quality of life of immunotherapy patients & caregivers
Methodology

- Study design: Qualitative
- Participants: Bee venom allergic patients
- Telephonic interview – QOL survey
- Patients and caregivers
Qualitative Study
Data collection

- Demographics
- History of bee allergy
- Quality of life
- Emergency care
- Satisfaction with health care
- Immunotherapy experience
- Availability of information
- Support
Findings
<table>
<thead>
<tr>
<th>Ranking</th>
<th>Impact on Patients</th>
<th>Impact on Caregivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inconvenience of medication and travelling</td>
<td>Inconvenience of medication and travelling</td>
</tr>
<tr>
<td>2</td>
<td>Fearful</td>
<td>Feel closer to child/ partner</td>
</tr>
<tr>
<td>3</td>
<td>Receive more support</td>
<td>Fearful</td>
</tr>
<tr>
<td>4</td>
<td>Anxious &amp; stressed</td>
<td>Anxious &amp; stressed</td>
</tr>
<tr>
<td>5</td>
<td>Unable to go places that I used to go beforehand</td>
<td>More conflict in the home</td>
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Caregivers vs Patients

- Caregivers are more aware of the adverse reactions to SIT
- Caregivers are more concerned about the allergy than patients
- 100% participants say that immunotherapy is not adequately publicised
Case Studies
Mrs C.

- Married with 2 children (7 and 4 years old)
- 7 yo daughter, Jade is allergic to grass and pollen (on Singulaire)
- Jade is also allergic to bees
- Family business: Bee keepers
  - Transporting honey
  - Interacting with the bees
  - Respect the bees
  - Bee keeping is “a part of who they are”
History of bee stings

- Jade had been stung many times
- Had only experienced a small, localised reaction
- But! 4.5 years old: Experienced a very severe reaction to a bee sting.

*In the garden, on her foot*

- Red and sweaty
- Localised swelling
- Limp/floppy

*She was nauseas and started vomiting*
Mommy, I feel funny! Something very bad is happening!
Emergency Care

- Rushed to her GP, who made special arrangements to meet immediately.
- Injected Jade with adrenalin
- Kept her an extra half hour to observe her
- Stabilised quickly
- Mrs C happy with treatment
- Sent home - Mrs C disagrees with this.
In Retrospect

I blame myself a little, as a mother I should have been more prepared for something like this. I should have at least taken a first aid course.

- Jade hates talking about the incident
- Covers her ears
- The fear and anxiety come rushing back
Jade

- Feels frustrated and misunderstood
  - *Why me? Why are my friends not allergic too?*

- Anxious child

- Previous stressful situation

- Traumatised for a year after

- Play therapist

- Difficulty distinguishing bee allergy anxiety
- Bribed to go to school
- Physically aware
- Stopped play dates
- Insecure with strangers
- Liked calm people
Immunotherapy

- Has been stung post immunotherapy
- Reaction to bee venom has greatly improved
- Was a painful experience for a young child
- Still takes some getting used to
- Brave girl
- *It was vital Jade immunotherapy, regardless of whether we were bee keepers.*
We all feel more confident now, as a mother I am still cautious and worry, but not to an unhealthy extent like before.
Mrs H

- 43 yo
- Married with 2 teenage girls
- Evaluates new varieties of fruit & crops
  - Spends most of the day outside in the orchards
  - Has become sensitised to pollen due to high exposure
  - She loves what she does
History of bee stings

- No recall of adverse reactions to stings as a child
- September 2009 – 7th sting
  - “I cannot tell you the pain”
  - “Intensity seemed to last longer”
- October 2009 – 8th sting
  - Fell unconscious
  - “Thought I was going to die”
  - “Outer-body experience”
  - Intense thirst
Emergency care

- Not happy with treatment
  - Miscommunication
  - Inadequate examination
  - Ineffective prescribing
  - Sent home unstable

- “No one took it seriously”
- “Body still doesn’t feel 100%”
Emotional repercussions

- Angry & hurt
  - Believed to be a hypochondriac fabricating a story
  - Not even mother & husband believed her
  - Don’t believe a tiny bee can “cause so much trouble”
  - Daughter in Matric blamed her for poor results
  - Therapist gave unsound advice

- Experience has changed the way she relates to people
“Scary experience”
- BP rises and gets ‘butterflies’

Nightmares
- “black cloud coming towards her”...
- “hunches over”...
- “stings all over body”...
- “wakes up crying”

“Is this my last day?”
- Resigned to fact that she may die

Nickelback song
- ‘If Today Was Your Last Day’

Death is not a positive thing
Impact of the allergy on the Patient

- Biological
- Social
- Psychological
Discussion

- Age of IT patients
- Female vs. male responses
- Ignorance of GPs & health professionals
Discussion

- Ignorance of the public
  - BV allergy
  - Immunotherapy
- Degree of psychological trauma
  - Inadequate care
  - Lack of counselling
Conclusion

- Negative impact of IT on quality of life
- Positives > negatives of IT
- Increased awareness of BV allergy & IT
  - GPs
  - Public
- Focus on education, counselling and empowerment
- Each case is unique
- Multidisciplinary team
Take home message...

“Help the families to help themselves”
Thank You!
References