Charles Bonnet Visual Hallucinations: The good the bad and the ugly!

Dr Meri Vukicevic
Danielle Thorburn

Department of Clinical Vision Sciences
Who was Charles Bonnet & what is his syndrome?
Diagnostic criteria

- Vivid, elaborate & recurrent hallucinations
- Psychologically ‘normal’ people
- Preserved intellectual functioning
- Insight into the unreal nature of the hallucination
Why does it happen?

• **Release theory**
  – *Lesion* at any level of the visual pathway causes release of defective electro-chemical impulses = hallucinations

• **Sensory deprivation theory**
  – *Reduced sensory input* to the brain as a result of an ocular/visual pathway lesion causes spontaneous discharge of neurones = hallucinations
Prevalence in the low vision population

• Europe, North America & Israel = 10-40%

• Asian studies report prevalence at < 1%

• Australian study = 17.5%
The Australian study

• **Aim**
  – To examine the prevalence & characteristics of CBS in the older aged, visually impaired population

• **Methods**
  – 200 consecutive patients attending ophthalmology clinics (age 60+, VA <6/12) were screened for CBS

• **Results**
  – Prevalence = 17.5% (35/200)
  – 30 non-VH patients used for comparison
Results

• No difference between VH & non-VH group for:
  – Age (61-92)
  – Sex (~75-80% female)
  – Visual Acuity (6/24-6/36)
  – Level of education (~20% w secondary ed)
  – Living situation (55-67% live alone)
  – General health conditions
  – Ocular diagnosis (AMD most common)

• Difference between groups for
  – Hearing loss
What do they see?

- Complex patterns
- Inanimate objects
- People
- Plants/Trees
- Animals
How often do the hallucinations occur?

- Daily
- Weekly
- Monthly
- Less often
Who have they told about it?

- Family
- No one
- Ocular health prof
A typical CBS sufferer

• Female
• ~78 years old
• AMD
• Hearing loss
• Primary school education
• Suffering with VH for > 12 months
• Images appear soon after waking
• Most likely sees people or colourful patterns
• Some stress experienced as a result of not knowing the cause
• Has told a family member about the VH
Does it cause them stress or upset them?

- Mild
- Moderate
- Severe
AN EPISODE OF THE GOOD TURNING TO BAD AND UGLY!
Mrs K

- Legally blind
- 4 year history of *typical* CBS
  - Never bothered her: “*usually I can laugh at it*”
  - Trigger = unfamiliar surroundings
- Hallucinations
  - “*Elephant walking in the street with a child on its back*”
  - Intricate blue designs on plates
Mrs K

• Atypical presentation of CBS on Black Saturday
  – Evacuated from her home on this day
  – Extreme stress caused “horrific hallucinations”
faces/eyes melted away

leop.de a female ened with irly-black meg hair
Mrs K

- Recalled earlier distressing episodes from significant fires as a child while living in London
- “Fire has a particularly bad effect on me”
  - Chimney in family home caught fire (age 2)
  - Witnessed burning of the Crystal Palace (1936)
  - In London during the Blitz (Sept 1940-May 1941)
Conclusion

• First report of atypical presentation in the literature
• Stressful life event can change the nature of CBS
  – non-distressing to distressing
• No treatment of proven effectiveness
  – ? Blinking/closing eyes
  – ? Serotonin inhibitors
• Limited knowledge of triggers & causes
  – Need for further research

• Vukicevic M. *Frightening visual hallucinations: atypical presentation of Charles Bonnet syndrome triggered by the Black Saturday bushfires.* Medical J. of Australia 2010; 193.