

Visual Vertigo

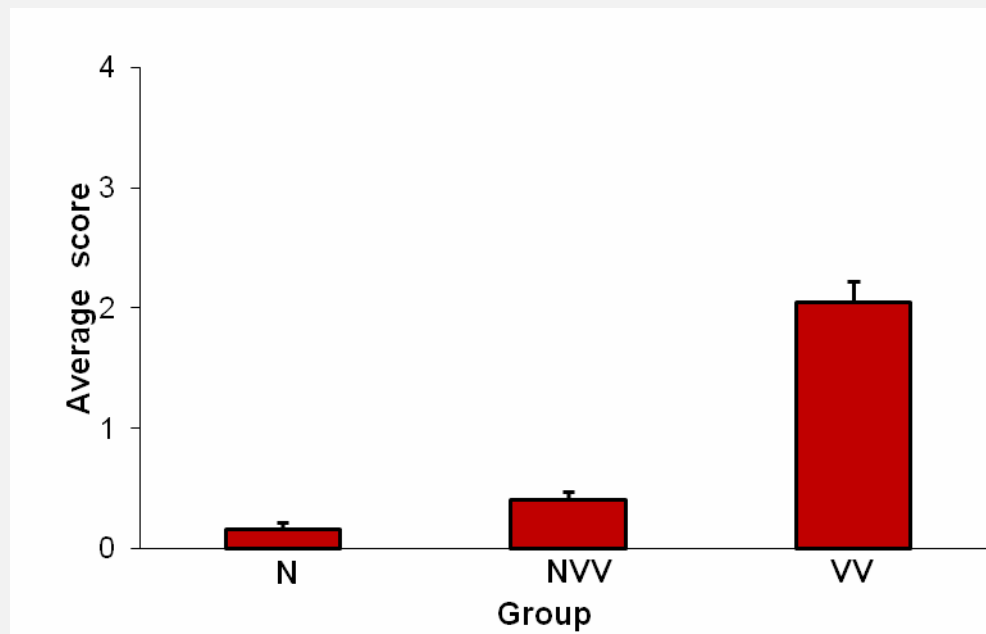
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What is visual vertigo?

- Space and motion discomfort, visual vestibular mismatch, motorist disorientation syndrome
- Syndrome where symptoms are triggered or exacerbated in situations involving rich visual conflict or intense visual stimulation (Bronstein, 1995)
- Visual dependency

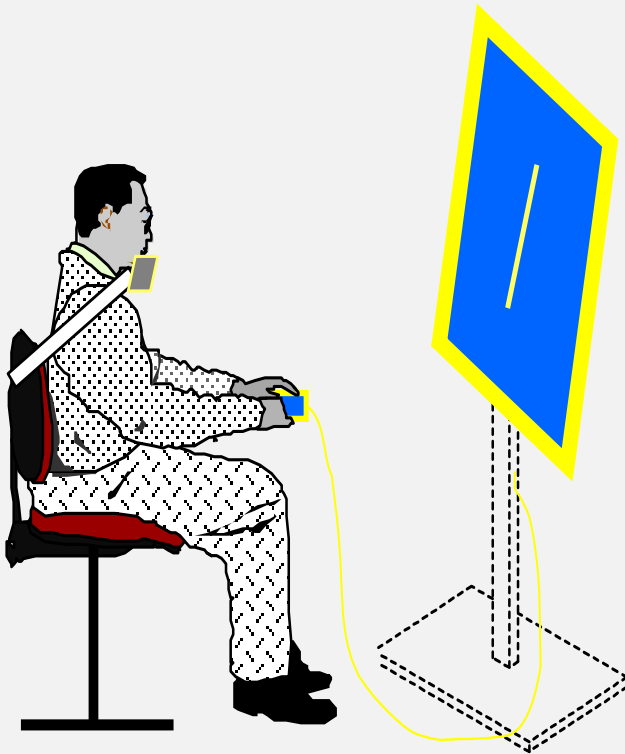
How do we identify visual vertigo?

- Patient history
- Situational Characteristic Questionnaire (Pavlou et al., 2006; Guerraz et al., 2001; Jacob et al., 1989)



How do we identify visual vertigo?

- Rod and Frame test, Posturography : NO



How do we treat visual vertigo?

Previous studies

- Animal studies have shown that dynamic disturbances of vestibular function require both **visual** input and body/head movement for recovery. (Lacour et al., 1976)

- “We have observed marked improvements in both optokinetic nystagmus and posture control after 6 weeks of optokinetic stimulation.” (Tsuzuku et al., 1995)

How do we treat visual vertigo?

- Simulator-based therapy
- Virtual reality
- Visual motion DVD

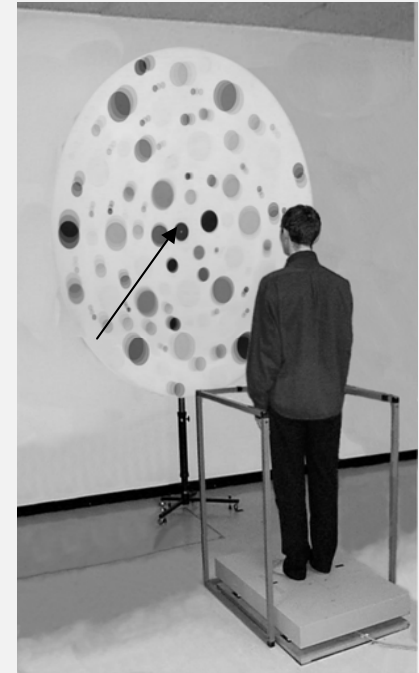


http://www.mvrc.pitt.edu/facility_balance.html

Simulator-based treatment



Eye Trek



Optokinetic disc

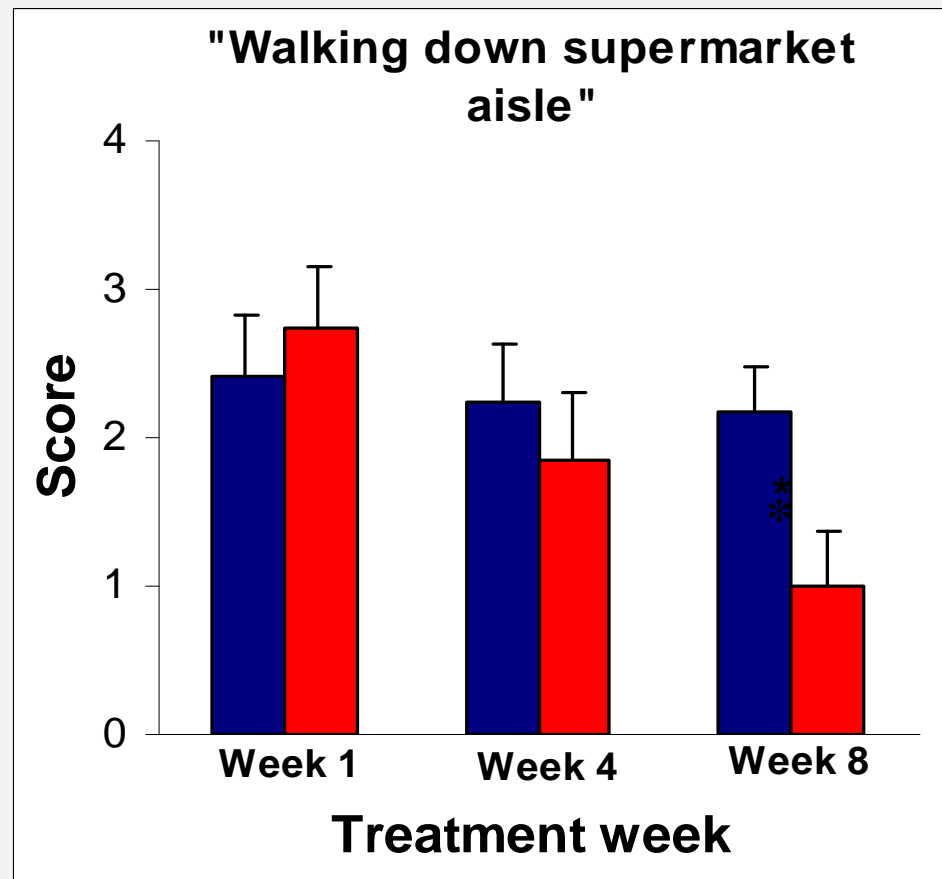


Optokinetic drum and rotating chair



Planetarium

Specific SCQ questions



Score key:

- 0 no symptoms provoked
- 1 very slightly
- 2 somewhat
- 3 quite a lot
- 4 very much

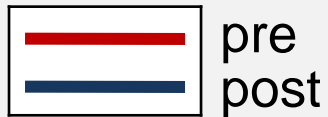
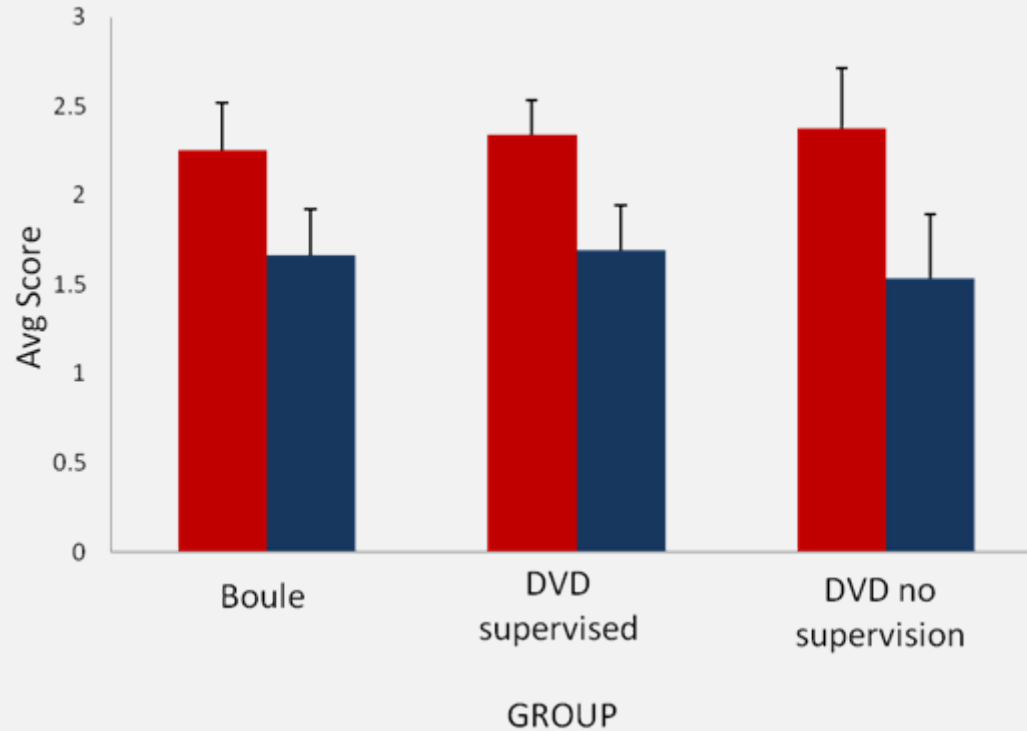


Visual motion DVD

Current study:

- Investigates the benefit of customised exercises in combination with visual motion provided via machine-based equipment or via a DVD
- Patients attend once weekly or do a non-supervised home exercise programme for eight weeks
- Regardless of treatment type all groups have customised DVD and physical exercises to do at home

SCQ



Score key:

- 0 no symptoms provoked
- 1 very slightly
- 2 somewhat
- 3 quite a lot
- 4 very much

Conclusions

Visual vertigo rehabilitation must:

- **Incorporate a combination of customised physical exercises with exposure to visual motion stimuli**
- **be catered to the patient's needs**
- **progressive**
- **be functionally oriented**
- **offer some form of supervision**

Summary

- Visual vertigo can be easily & quickly detected using the SCQ and this should form part of the initial assessment so that appropriate treatment may be provided.
- Syndrome where symptoms are triggered or exacerbated in situations involving rich visual conflict or intense visual stimulation (Bronstein, 1995)
- Visual dependency

Future research

- “optimal” treatment strategies
- “optimal” treatment duration
- Benefit of rehabilitation incorporating visual motion stimuli in other patient groups with visual dependency

THANK YOU