information

VISION & PARKINSON'S

Parkinson's is a progressive neurological condition, which is characterised by both motor (movement) and non-motor symptoms.

In spite of there being reduced dopamine in the retina, Parkinson's does not cause loss of vision. In recent years there has been an increase in evidence that some visual changes do occur related to Parkinson's. All visual changes in Parkinson's may impact on driving.

One of the cardinal symptoms of Parkinson's is bradykinesia (slowness of movement) and this is linked with several changes in vision:

- Blurred or double vision
- Dry eyes
- Reduced eye blink rate

Blurred or double vision is commonly experienced when reading or focusing on nearby objects and is due to problems moving the eyes from side to side or tracking. Modification of reading glasses may be helpful. Some older forms of medications (anticholinergics) used in the treatment of Parkinson's may have double vision as a side effect.

Dry eyes are common in Parkinson's and are associated with reduced eye blink rate. Blinking cleanses the eyes by removing dust and impurities. When blink rate is reduced impurities build up leading to dry and irritated eyes. Conversely, reduced eye blink rate can also result in excessive watering or tearing as the tears are not distributed across the eye. Conscious attention to blinking will assist and artificial tears in the form of eye drops will relieve dry irritated eyes.

Reduced eye blink rate is clearly evident and is sometimes misinterpreted as staring. This adds to the facial 'masking' or reduced facial expression symptom in Parkinson's. Conscious attention to blinking will assist.

Other Parkinson's related vision changes are:

- Blepharospasm
- Colour and Contrast Vision Changes
- Glaucoma and Parkinson's
- Illusions and Visual Hallucinations
- Perception of Movement
- Visuo-spatial Orientation

Blepharospasm can be a clinical diagnosis in the absence of Parkinson's. It occurs when the muscles which close the eyelids contract or go into spasm. These may result in repeated twitching of the eyelid, difficulty in maintaining an open eye and sometimes intermittent involuntary closure of the eye. When it is part of the presentation of Parkinson's it may require treatment and Botox injections may be suggested following careful review and assessment.

The following changes in vision are associated with impaired electrical signals and feedback in the brain.

Colour and Contrast Vision Changes

People living with Parkinson's may find it difficult to discriminate between slight variations in colour. This may be worse in shades of blue or blue/green. Contrast vision changes are often associated with low lighting, for example the person may be unable to clearly see a light coloured object on a light background.

Glaucoma and Parkinson's

Some older types of medications used in the management of Parkinson's (anticholinergic drugs such as Artane®) are contraindicated in people with glaucoma. These are rarely used now. Eye drops used in the treatment of glaucoma may cause lowering of blood pressure. Low blood pressure is common in Parkinson's so care must be taken if drops for glaucoma are introduced as further lowering of blood pressure can add to the risk of falls.

Illusions and Visual Hallucinations

Illusions and visual hallucinations are associated with both

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Parkinson's and the medications used in the treatment of Parkinson's. Older people, those who have lived with Parkinson's for a longer time and those with cognitive changes are more sensitive to this side effect. The visual hallucinations are usually well formed and detailed. The person with Parkinson's may or may not have insight into the reality of the hallucinations.

It is important to assess for an infection as hallucinations occur frequently when a person with Parkinson's has a urinary tract or chest infection. They may also occur temporarily following an anaesthetic.

Perception of Movement

Parkinson's may result in inaccurate perception of movements and an underestimation of the speed of moving objects. This is a potential problem when driving or as a pedestrian.

Visuo-spatial Orientation

Parkinson's related problems with visuo-spatial orientation leads to difficulty with accurately assessing the distance between objects. This can be evident when negotiating narrow spaces or when walking past objects. It may be helpful to reach out and touch the side of the doorway or the object. An occupational therapist can give advice about adaption of the environment. Changes in visuo-spatial orientation may be associated with freezing of gait or motor blocking. The use of visual or auditory cues can overcome these temporary difficulties. Problems with visuo -spatial orientation will impact on driving.

Conclusion

Changes to vision are common as we age and may increase the risk of falls. Not all changes to vison will be due to Parkinson's so it is important to maintain regular eye checks and discuss any changes with an optician and GP. If possible consulting an optician with expertise in neurological conditions is recommended.

Parkinson's Australia is a federation of member organisations including Parkinson's ACT, Parkinson's Queensland, Parkinson's SA & NT, Parkinson's Tasmania and Parkinson's WA.

For further information contact
your state Parkinson's organisation:
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