Reducing depression and anxiety in visually impaired older people

Impaired vision, from conditions such as macular degeneration or glaucoma, is an important cause of age-related disability. Depression and anxiety are common in visually impaired adults and can lead to increased disability, decreased quality of life, decline in health status and even mortality.

Care providers may underestimate the negative effects of loss of vision on mental health, so detection and treatment of anxiety and depression are often lacking for this patient group.

In this trial, 265 people aged 50 and over were randomly assigned to a stepped care programme plus usual care (n=134) or usual care only (n=131). Stepped care involved:

- Watchful waiting (three months).
- Guided self-help based on cognitive behavioural therapy.
- Problem solving involving up to seven face-to-face sessions with social workers or psychologists aimed at clarifying problems and establishing realistic goals.
- Referral to GP and possible medication.

Treatments on the stepped care programme were offered individually so patients would only progress through all stages if they continued to show symptoms of depression or anxiety.

Results of the trial show that the stepped programme was associated with a significantly reduced incidence of depressive and anxiety disorders.

The researchers conclude that this approach could lead to the creation of standardised strategies for screening, monitoring, treatment and referral of visually impaired older adults.


Botox provides tone reduction and clinical benefit in hemiparesis

Patients with upper limb spasticity after stroke have reduced movement and distressing postures in the affected arm. This is because of increased tone in the antagonistic muscles that are resisting movement. Tightness can be reduced by injecting botulinum toxin directly into these hypertonic muscles.

It is already known that this treatment can reduce pain and resistance to passive movement, but this randomised, placebo-controlled trial aimed to explore its effect on active, independent movement.

The trial enrolled participants from 34 neurology or rehabilitation clinics in Europe and the US. Results show improvements in active range of movement in elbow, wrist and fingers starting as early as one week after injections and persisting for at least 12 weeks.

Future research should test repeated botulinum toxin injections and focus on active movement and function as the main outcome measures.


Relationship between Alzheimer’s disease and heart failure

The link between decreased cerebral blood flow and cognitive impairment is well known, but there is also an association between reduced blood flow to the brain and the pathogenesis of Alzheimer’s disease.

Neuromaging studies have provided growing evidence of an association between heart failure and brain atrophy, and it has been suggested that heart failure is a risk factor for Alzheimer’s disease.

The relationship remains unclear, but decreased cerebral blood flow, and activation of hormones released by neurons, may contribute to dysfunction of the neurovascular unit and cause an energy crisis in neurons. This leads to impaired clearance of amyloid beta protein and hyperphosphorylation of tau protein, resulting in the formation of the amyloid beta plaques and neurofibrillary tangles characteristic of Alzheimer’s disease.

Heart failure does not result in sudden neuronal death, but reduced cerebral blood flow means a lack of metabolic energy. This results in acidosis and oxidative stress followed by dysfunction in enzymes and protein synthesis. More attention should be focused on the field of neurocardiology, and cognition should be evaluated in patients with heart failure.