

OPTOMETRIC CARE OF THE PATIENT WITH ACQUIRED BRAIN INJURY

For Eye Care Practitioners and the Lay Public*

*A Joint Organizational Policy Statement of the
American Academy of Optometry and the
American Optometric Association*

Vision dysfunctions are among the most common sequelae associated with acquired brain injury (ABI). The anatomy and physiology of the vision system, the vascular and neural network of the brain, and the dynamics of head trauma all contribute to the high incidence of visual dysfunction in this population. Causes of brain injury which may contribute to visual dysfunction include blunt, penetrating, or acceleration/deceleration trauma; cerebral vascular accidents; whiplash injury; suffocation/hypoxia; and pharmacological toxicity.

A significant number of patients with ABI will present with signs and symptoms which may indicate a vision problem. These include, but are not limited to, the following:

SYMPTOMS

- Blurred vision posture
- Confusion when performing visual tasks coordination problems
- Dizziness/vertigo objects
- Difficulty reading covering one eye
- Double vision misalignment
- Eye strain turns
- Headaches of depth
- Reduced ability to sustain attention on to accurately visual tasks
- Visual fatigue

SIGNS

- Abnormal body
- Balance and
- Bumping into
- Closing or
- Eye
- Head tilts or
- Poor judgment
- Reduced ability localize objects

The above signs and symptoms are often associated with injury to the eye or the sensory, motor, or the associated areas of the visual system patient and may be the result of the following:

- Accommodative disorders
- Non-strabismic binocular
- Ocular motility disorders
- Reduced visual acuity
- Strabismus
- Visual field loss
- Visual information processing disorders

Since activities of daily living involve effective integration of visual information processing and visual motor performance, the ABI patient is frequently handicapped both vocationally and avocationally.

OPTOMETRIC EVALUATION AND MANAGEMENT

The patient with ABI should have a comprehensive visual evaluation of refractive error, ocular motility disorders, binocular anomalies, accommodative disorders, ocular health, and visual information processing. As a member of, or consultant to, the patient's rehabilitation team, the optometrist is able to relate specific visual dysfunctions to patient's symptoms and performance to provide remediation and guidance. This will increase the effectiveness of the overall rehabilitation program, which is often highly dependent upon vision.

The evaluation of the patient with ABI may include, but is not limited to, the following:

- Comprehensive eye and vision examination
- Extended sensorimotor evaluation
- Higher cerebral function assessment of visual information processing
- Low vision evaluation
- Extended visual field evaluation
- Electrodiagnostic testing

Optometric management of the patient with ABI may incorporate one or more of the following:

- Treatment of the visual dysfunction utilizing lenses, prisms, occlusion, low vision devices, and/or vision therapy
- Treatment of ocular disease or injury either directly or by co-management with other health care professionals
- Counseling and education of patient, family, or caregiver about the patients visual problems, functional implications, goals, prognosis, and management options
- Consultation with other professionals involved in the rehabilitation and health care of the patient

CONCLUSION

Optometrists provide essential vision services in the rehabilitation process of the patient with brain injury, including diagnosis, treatment and consultation in order to maximize the patient's outcome. The ultimate goal of these services is to improve the patient's quality of life.

*This report is furnished for general information purposes only. It does not constitute the practice of optometry or medicine, nor should it be relied upon for dealing with a specific, individual medical or health condition. Please consult a qualified eye care professional for advice about a specific condition.

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