Cortical Visual Impairment

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About Burju

Burju Sari, M.Ed., TVI, is an experienced Teacher of the Visually Impaired, international speaker and trainer, and the founder of BrightSight Education and Consulting and CVI Turkiye. A graduate of UMass Boston's Master's Program in Education for Teachers of the Visually Impaired, she has dedicated her career to supporting children and young adults with visual and multiple disabilities.

Burju worked for more than 12 years at Perkins School for the Blind, serving students aged 0–21 before continuing her work as an independent consultant. She holds an Executive MBA degree from Salem State University and a CVI Graduate Certificate from UMass Boston. During her three years at the Perkins CVI Center, she contributed to the development of the Perkins CVI Protocol and taught graduate-level courses at Fitchburg State University.

Her work is deeply inspired by her son, who has special needs and a CVI diagnosis. As the founder of CVI Turkiye, established in 2015, Burju has led professional training and student evaluations in various cities, promoting CVI awareness and best practices internationally.

What is CVI?

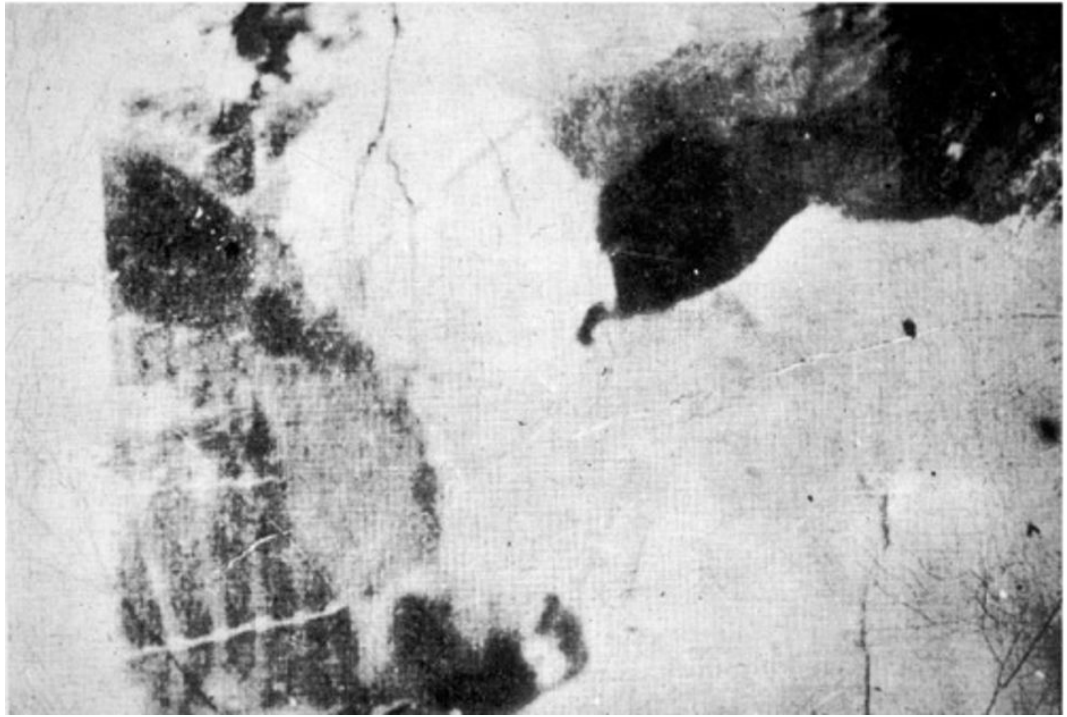
- Brain-based visual impairment - the eyes see, but the brain struggles to interpret
- Vision may fluctuate depending on fatigue, environment, and medical states
- CVI is now the leading cause of visual impairment in children in the US
- CVI is about visual processing, not eye health.

How common is CVI?

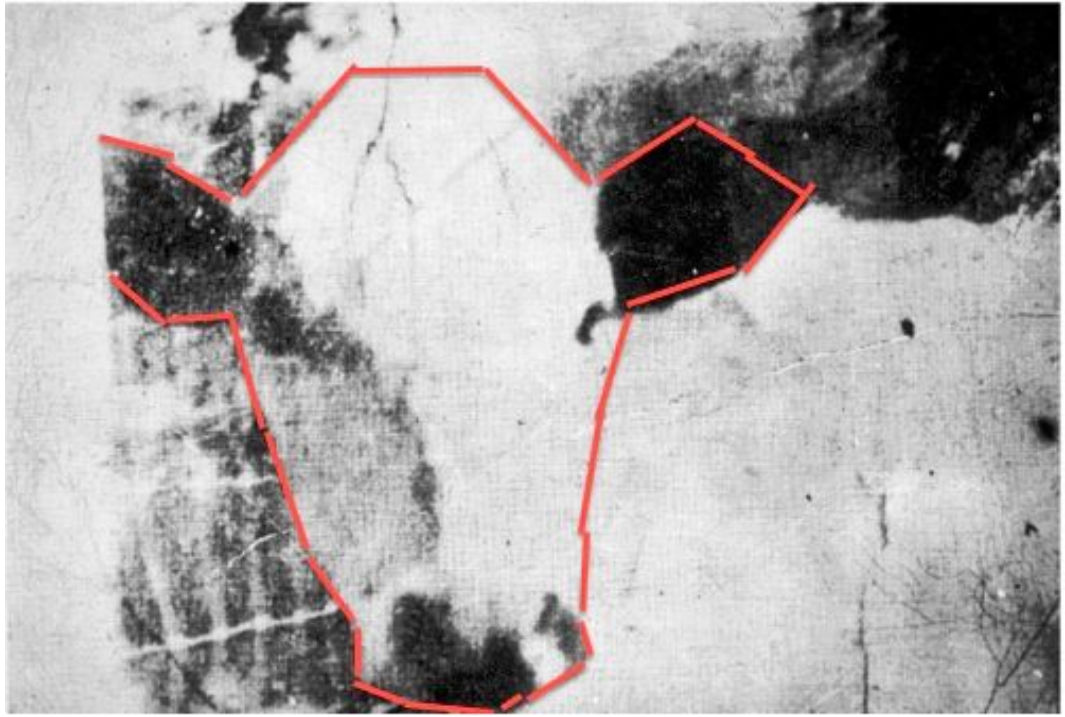
- CVI affects 30-40% of all children with visual impairments
- About 1 in 30 school-aged children may show CVI-related visual challenges
- Over 180,000 children in the US are estimated to have CVI, though most remain undiagnosed

What do you see?

How about now?



With modifications?



Looking does NOT mean understanding

CVI and the Brain

- The brain's visual system includes two pathways:
  - Dorsal Stream: "Where/How" system (movement, color)
  - Ventral Stream: "What" system (faces, recognition)
- Children with CVI may have difficulty in one or both pathways.
- Both pathways work together to help us recognize and interact with what we see.

<u>Hope Through Neuroplasticity</u>

- Neuroplasticity: The ability for the brain to "adapt" and change over time
- There is a potential for improved functional vision which depends on:
  - Location
  - Timing
  - Extent of injury
  - Experience
- With the right experiences, the brain can learn new ways to see.

Common Visual Behaviors

- Visual access fluctuates — unpredictability
- Processing visual info takes extra time
- Easily affected by visual clutter, crowding, and competing sensory input
- 2D could be harder than 3D
- Attracted to light and motion
- Distorted or absent eye movements, nystagmus or tactile stimulation
- Visual fields might be fragmented
- Difficulty with looking at faces, eye-to-eye contact
- Difficulty with recognizing people or types of objects
- Plays with toys without looking
- Reaches while looking away

Compensatory Strategies

Compensatory Skills refer to techniques or strategies used by individuals with visual impairments to access their world & to use their strengths to overcome areas of challenge

- Tactile Skills
- Auditory Skills
- Color Coding
- Verbal Cues
- Routines
- Context

Strategies

- Simplify spaces, reduce clutter
- Use solid high-contrast backgrounds
- Present less toys at a time (uncluttering)
- Bright colored or shiny objects/toys
- Support activities in familiar routines
- Backlighting can help attention and recognition but may cause fatigue—observe what works best
- Vary or dim bright lights whenever possible
- Encourage exploration in safe, predictable spaces
- Narrate surroundings or sensory experiences (“I’m picking up your red ball”)
- Pair touch, movement, and sound with content to build understanding

Partnering with School or Early Intervention

- Request Assessment
  - CVI Assessment
  - Functional Vision Assessment (FVA)
  - Learning Media Assessment (LMA)
  - Expanded Core Curriculum (ECC) screening
  - Orientation and Mobility (O&M) Assessment
- Ensure IEP OR IFSP includes CVI-based accommodations from the assessment
- Remember, your child’s educational plan should reflect how they see — not just what they see.

Early Diagnosis Matters

- Time
  - Early identification leads to better outcomes, allowing tailored support for children with CVI.
- Collaboration
  - Involving together with families, educators, therapists, and professionals to create consistent, family-wide support.
- Support
  - Immediate access to resources, interventions, appropriate programs and early intervention to build foundational skills.

Once you understand how your child sees, you can change how the world looks to them.

I believe that when families truly understand how their child sees, they become the most powerful part of the intervention team.

Resources

- CVI Scotland
- CVI Now – Perkins
- Paths to Literacy
- Teach CVI