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## Introduction

- Individuals who become blind and visually impaired (BVI) later in life face challenges in activities of daily living, navigation, and occupation.
- The visually impaired individuals need to learn new ways to lead self-sufficient lives.

## Case Description

- A 77-year-old blind female was admitted to rehab after an unwitnessed fall leading to a large left thalamic intraparenchymal hemorrhage (IPH) with right sided weakness.
- She had been legally blind due to pseudoxanthoma elastica (PXE).
- Though IPHs are fairly common, our patient had unique rehabilitation considerations due to her visual impairment.
- With her recent fall and visual deficits, she was reluctant to attempt ambulation and was worried about falling again.

## Assessment & Results

- Visual cues that are widely used for gait training were not appropriate for her situation, therefore we employed proprioception and relied on her other senses for rehabilitation training.
- Eventually, she regained confidence and is able to ambulate with an assistive device.

## Discussion

- For patients who fall or have strokes, physical therapy is crucial for functional recovery, but in the BVI population re-learning how to interact with the environment can be challenging.
- Rehabilitation options include tactile stimulation, extra safety measures, magnifying visual aids, and using a cane not only for support but also to assist with awareness of their immediate surroundings.
- With recent advances in technology, patients may have access to canes with infrared sensors, electronic braille, and electronic/vibrotactile devices.
- Our patient required maximal assist initially and was noted to improve with verbal cueing. She was taught how to ambulate with a hemi walker. For cognition, larger font, reading device and verbal support were provided.

### **Assistive Technology:**

- Canes with infrared sensors.
- Electronic braille.
- Electronic/ vibrotactile devices.
- Low vision aids.
- Global positioning systems.

### **Physical & Occupational therapy:**

- Learning how to use a cane.
- Verbal Cues.
- Orientation and mobility training, e.g clock method
- Assessment & training in home and community.
- Use and care of a guide dog.

### **Vocational training:**

- Training in communication.
- Computer skills.
- Manual skills for crafts.
- House-hold repairs.



### **Counselling:**

- Adjustment to vision loss through individual and family counselling.
- Support groups.

## Conclusion

- A multi-dimensional approach is needed to help BVI individuals function better and become as independent as possible.

