What is Retinitis Pigmentosa (RP)?

Retinitis Pigmentosa (RP) consists of several hereditary diseases that cause deterioration of the photoreceptor cells within the retina, the light sensitive tissue lining the back of the eye. As these cells deteriorate, vision loss progresses.

What are Photoreceptor Cells?

Photoreceptor cells live within the retina and are responsible for capturing and processing light. There are 2 types of photoreceptor cells:

» **Rods:** cells that are responsible for peripheral (side) and night vision

» **Cones:** cells that are responsible for detailed vision (reading, driving, recognizing faces), as well as for distinguishing colors

RP typically damages the rods, affecting patients' night and side vision, eventually leaving only "tunnel vision".

Symptoms of RP

It is important to understand that there are variations in this eye condition, but typically the symptoms of RP are recognized in children, adolescents and young adults. The disease then progresses throughout the individual's life. The following is a typical advancement of rod-cone RP:

Night vision begins to deteriorate, progressing to night blindness

» Most forms of RP first attack the rod cells which are responsible for night and peripheral vision

» Night blindness is similar to what normally sighted individuals encounter when entering a dark room after being outside in the bright sunlight

Peripheral vision begins to fail leading to "tunnel vision"

» As the disease progresses, more rod cells degenerate

» A ring of vision loss in the mid-periphery is often experienced

» Small islands of vision in the extreme periphery may remain

» RP patients usually, though not always, keep a small degree of central vision their entire life

Symptoms of RP (continued)

Problems with color vision

» Some people may also have trouble seeing different colors.

Loss of central vision

» Some people also have problems with central vision. This can make it difficult to do detailed tasks such as reading or threading a needle.

Treatment / Current Research

Unfortunately, currently there is no effective treatment to cure retinitis pigmentosa (RP). However, there is extensive research being conducted at this time.

Current RP research includes:

» **Vitamins and supplements** — Studying vitamins and supplements that can slow the loss of vision in certain forms of RP.

» **Gene therapy** — Isolating the genetic mutation that is the cause of RP could potentially lead to figuring out how to restore the production of the missing or abnormal protein.

» **Retinal transplantation** — Transplantation of stem cells into the retina to potentially replace dead cells.

» **Retinal prosthesis** — Using retinal prosthetics that transform light into electrical signals that can be sent directly to the inner retina and brain, avoiding the diseased part of the outer retina.

Living with RP

Skills needed to continue to stay active and independent:

» Safe mobility skills obtained from training with an Orientation and Mobility specialist (O&M) or occupational therapist (OT) who specializes in low vision rehabilitation.

» Using adaptive aids like sun filters to help maximize the remaining vision.

For more information on living with vision loss, contact Lighthouse Low Vision Services at: (206) 436-2154
OR
bit.ly/LighthouseLVS

References

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