## In The Line of Light: A Case Study of Occupational Laser Induce Maculopathy

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## Abstract

**Introduction:** Laser-induced maculopathy is a rare but potentially sight-threatening condition that can result from accidental exposure to high-intensity laser radiation. This is seen as a significant occupational hazard for health professionals using medical lasers.

**Case Presentation:** A 51 year old, female vitreoretinal surgeon, who unexpectedly encountered a reflected laser beam during a laser photocoagulation procedure. The surgeon reported experiencing a sudden transient flash of light, which prompted immediate concern.

**Results:** Optic coherence tomography (OCT) showed the presence of burn marks and other characteristic signs of laser-induced maculopathy in the surgeon's eye, primarily concentrated in the macular region.

**Discussion:** The study emphasizes the importance of establishing preventative measures, raising awareness, and providing appropriate protective devices during laser procedures to minimize the occurrence of such incidents. Understanding the mechanisms behind laser-induced maculopathy, including the precise wavelengths and power densities involved, is crucial for preventing these injuries. Developing standardized safety guidelines, providing adequate training, and implementing regulations regarding laser equipment usage are essential steps in safeguarding the ocular health of medical professionals.

**Conclusion:** This case study not only reinforces the potential risks faced by vitreoretinal surgeons during laser photocoagulation procedures but also underscores the need for increased emphasis on proper laser safety protocols.