



Ophthalmic Eponyms: Behind the Name

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Introduction

Eponyms can be a:

- Structure
- Technique
- Instrument/Device
- Medical Condition

Eponyms are structures, techniques, instruments, and medical conditions associated with the name of the discovering scientist or physician. When it comes to naming and discovery, eponyms have become both a tradition and a point of controversy in anatomy and medicine.

Eponyms allow for quick identification due to name recognition. Unfortunately, some conditions have the same eponym. This can be seen with Fuchs, which can be found in 25 different identified findings, symptoms, instruments, and ophthalmic diseases. There are also eponyms that have challenged the medical community, particularly those named after individuals with unethical and historically criminal backgrounds.

Discussion

Most notable of the plethora of Fuchs eponyms is Ernst Fuchs' identification of a pale corneal clouding, which he noted on slit lamp examination, now known as Fuchs' corneal dystrophy.²

Unfortunately, Fuchs can cause confusion due to the multitudinal variances of his eponyms. Most of the time, mention of Fuchs would point to Fuchs' corneal dystrophy but, in other cases, it remains imperative that there should be **additional** information for clear identification.

Unlike the Fuchs' eponyms, other ophthalmic eponyms can be very specific to their finding or disease. After identifying plaques of cholesterol in the retina, the Hollenhorst plaque was named after the Mayo Clinic ophthalmologist, Robert Hollenhorst. It is a clinical finding of retinal embolus and can be a cause of central or branch retinal artery occlusion. Hollenhorst plaques are specific not only to color, shape and origin, but also in meaning. Stephen M. Drance, the ophthalmologist who recognized that glaucoma development is not dependent on high intraocular pressure, has been credited with much of the research into risk factors and clinical findings. Drance's finding of splinter-shaped, optic disc hemorrhage was named after him.

When it comes to eponyms, it is uncommon to find female scientists and physicians who have been credited. This is mostly due to the late acceptance of females into the field of anatomy and medicine.⁵ However, there are some notable eponyms which have been credited to females. Ester Elisabeth Gröenblad observed retinal angioid streaks, clinical ophthalmic findings of PXE or Gröenblad Syndrome.⁶ Hurler syndrome was identified by Gertrud Hurler, a pediatrician, who noted the distinct corneal clouding in these patients.⁷

There are also eponyms that have challenged the medical community, particularly those named after individuals with unethical and historically criminal backgrounds. Reiter's syndrome is named after Hans Reiter for his studies of reactive arthritis with conjunctivitis/uveitis. Reiter's wartime activities and alignment with the Nazis became a point of contention and his eponym is now under petition to be retracted. 8

Another discovery tainted by crimes against humanity is named after Friedrich Wegener. Although Wegener's cases were the first documentation of airway granulomatosis, Wegener's early association, leadership, and actions with Nazis led to a petition for name change in 2002.8 Since then, the condition is called granulomatosis with polyangiitis (GPA). GPA still often appears with a mention of its previous eponym.

Wegener's granulomatosis

Granulomatosis with Polyangiitis

Reiter's syndrome

Reactive Arthritis

Conclusion

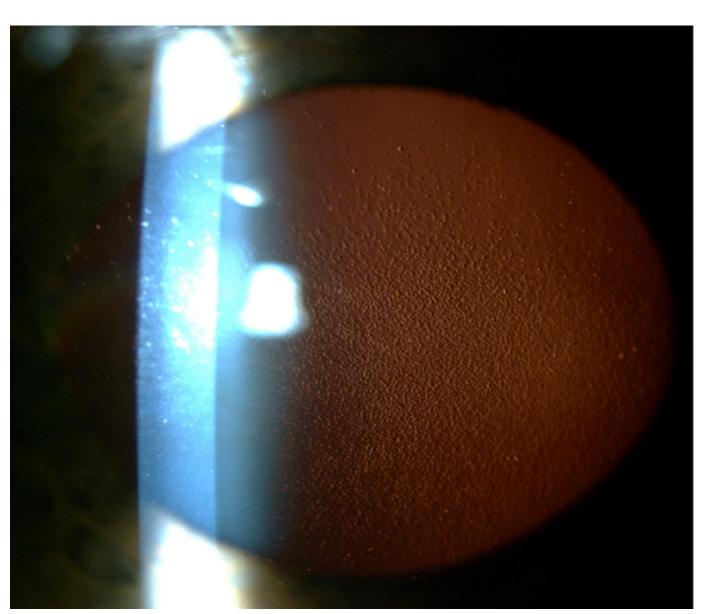
It may be time to consider retiring certain eponyms, particularly those with unsavory ethical histories. A formula should be followed when crediting medical discoveries. This formula should include a clear definition, accurate historical background, and ethical responsibility. When all these are present, eponyms will represent a distinction that should be continued.

Eponyms have been a source of pride and an honor in the medical community. Their significance credits the individuals who researched and contributed to the advancement of ophthalmology.

References

- 1. Yale S, Tekiner H, Yale ES. "How to classify, teach, and learn ophthalmic eponyms." Cureus. 2021;13(10):e18849.
- 2. Ołdak, Monika, et al. "Fuchs endothelial corneal dystrophy: strong association with RS613872 not paralleled by changes in corneal endothelial tcf4 mrna level." BioMed Research International, Vol. 2015
- 3. Kaufman EJ, Mahabadi N, Patel BC. Hollenhorst Plaque. [Updated 2022 Aug 8]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-.
- 4. Kanukollu VM, Ahmad SS. Retinal Hemorrhage. [Updated 2022 Aug 8]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-.
- 5. Van Tassel SH, Segal KL, Ciralsky JB, Sun G. "Eponymous women in ophthalmology: syndromes with prominent eye manifestations named after female physicians." Eye (Lond). 2018;32(8):1293-1295.
- 6. Terry SF, Uitto J. Pseudoxanthoma Elasticum. 2001 Jun 5 [Updated 2020 Jun 4]. In: Adam MP, Everman DB, Mirzaa GM, et al., editors. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993-2022.
- 7. McGrath O, Au L, Ashworth J. "Management of corneal clouding in patients with mucopolysaccharidosis." Journal of Clinical Medicine. 2021; 10(15):3263.
- 8. Ferguson RP, Thomas D. "Medical eponyms." J Community Hosp Intern Med Perspect. 2014;4(3):10.

Images



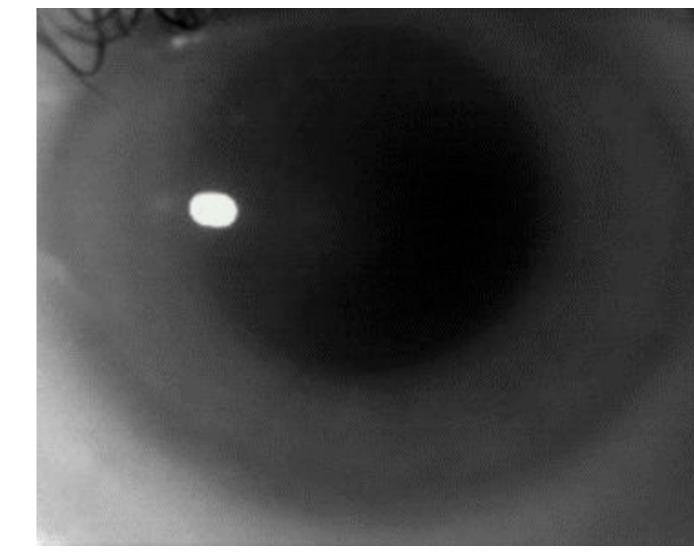
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Image 1 shows the dimpled appearance of corneal epithelium. This represents pathological guttae that are distinctive of Fuchs' corneal dystrophy.²



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Image 2 has a white arrow pointing to a Hollenhorst plaque. In the lower right corner, a magnified image of the optic disc and plaque are shown.⁴



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Image 3 shows the corneal clouding that is distinctive in Hurler Syndrome.⁷