

A low-cost, moderate-fidelity model eye for scleral indentation: review of a forgotten letter from 1993

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Original letter



Purpose

- Scleral indentation is a skill seldom used in a 21st century clinic, however it remains important to master, allowing for a dynamic retinal assessment and is crucial for early detection of peripheral retinal abnormalities requiring intervention.
- This study reports on use of a model eye to practice this invaluable skill previously described in a letter to *Eye* in 1993

Setting/Venue

Multi-centre survey and feedback from a tertiary referral centre and a university teaching hospital



Methods

A model eye was produced following instruction from Chew & Gray 1993, (see QR code) including the formation of peripheral retinal tears.

Doctors with varying degrees of scleral indentation experience tested the model and provided feedback.

Survey questions included **grade** of tester, previous scleral indentation **experience**, is model eye a useful tool for doctors prior to starting scleral indentation on patients? Does the set-up with model eye simulate an indent and tear(s) adequately when viewed through the condensing lens? Retinal tears seen and number of tears?

Results

- Of the eight clinicians testing the model, three were consultants, two were post CCT fellows and three were ST4+ registrars, they had extensive (>100)/ some (20-100)/ limited (10-20) indentation experience, respectively.
- They unanimously agreed set-up with model eye simulated an indent and tear(s) adequately when viewed through the condensing lens and that it was a useful tool for residents/trainees prior to starting scleral indentation on patients. Most clinicians saw at least one retinal tear.
- Missed tears were due to clinicians not performing a 360-degree assessment. Misalignment was also a factor in less experienced clinicians missing tears.

Conclusion

This study confirms the validity of this previously described low-cost eye model for scleral indentation. It may serve as a stepping stone for novices to learn principles of this important skill prior to performing indentation on patients.