A new IOL handling device for universal IOL double-flanged scleral fixation

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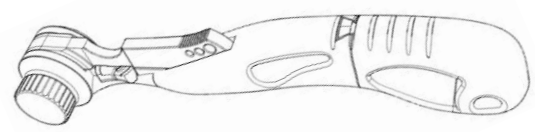
PURPOSE

Failure of the symmetry of the suture passing points in the intraocular lens (IOL)' s optic, represents one of the pitfalls of the double-flanged scleral fixation (SF) technique that may lead to **tilting** and induced postoperative **aberrations**.

Our purpose is to present a **novel device** that facilitates the precise symmetrical positioning of suspending sutures for double-flanged SFIOL.

MATERIALS AND METHODS

The device was designed using CAT software and printed using a 3-D printer.



The device consists of three parts:

1. **a handle:** permits *single hand-holding* of the device and carries the *sitting base* of an IOL insert and a fixation lever.

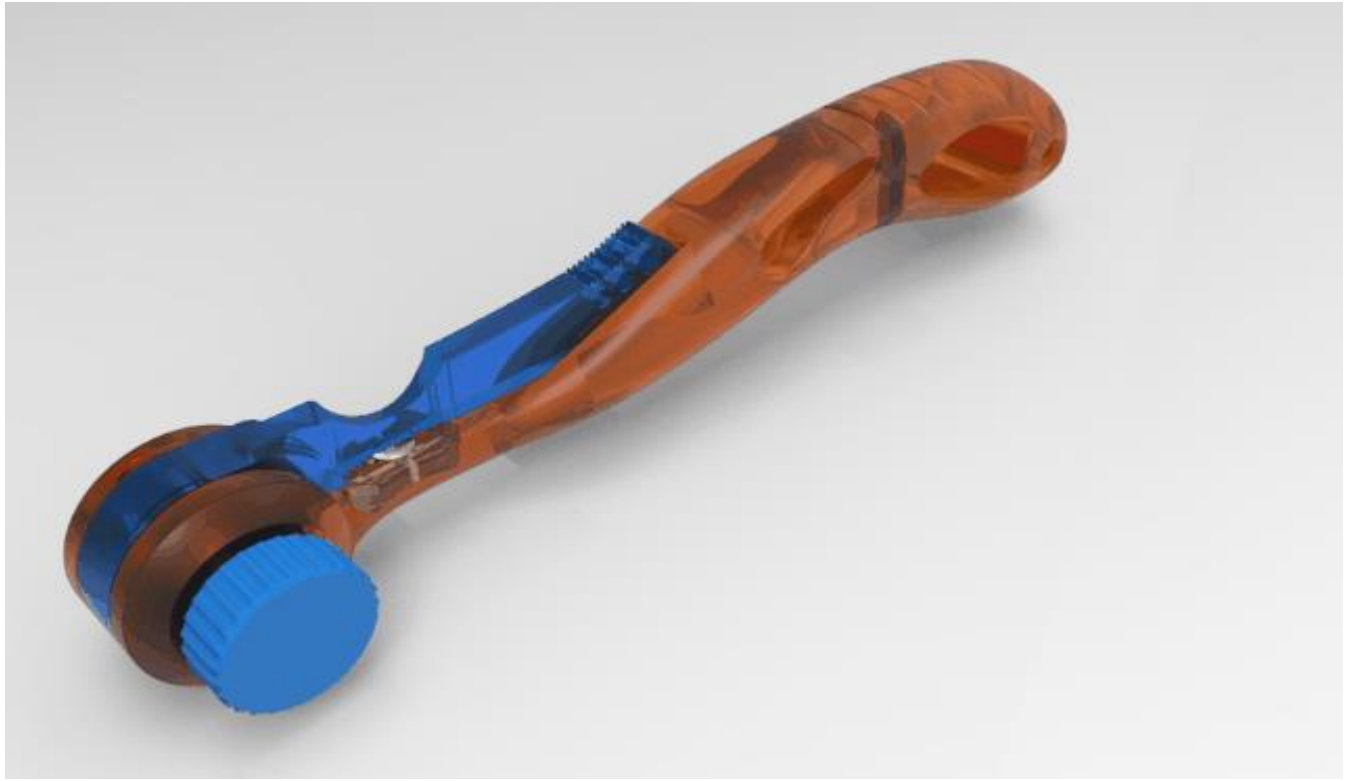
2. **an engraved, interchangeable IOL insert:** permits the positioning of the desired IOL in the *appropriate alignment,* assuring that the passing points of the suspending sutures will be symmetrically positioned at the IOL's optic.

   * Different IOL inserts accommodate for various IOL designs

   * Two anti-diametrically positioned slots determine the points of suture passage in order to maintain axial symmetry

3. **a lever:** fixes the IOL in the desired position and offers *adequate support*, permitting single hand-holding of the instrument-IOL complex while the the suture needle is advanced through the pre-specified points of the IOL's optic.

RESULTS



CONCLUSION

- This novel device facilitates the **precise symmetrical positioning** of suspending sutures for double-flanged SFIOL.
- Axial symmetry of passing points and respect of the lens' optic diameter can **minimize IOL tilting**.
- The possibility of **IOL insert engravement customization** make the device suitable for any lens design.