Pitfalls of Malyugin ring insertion

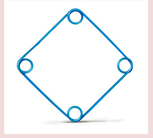
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Introduction:

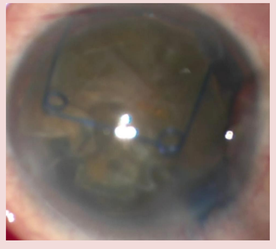
The Malyugin ring is frequently utilised in cataract surgery to achieve adequate pupil dilation in cases with small pupils. Although its insertion is generally straightforward, certain challenges must be recognised and managed to avoid complications.

We present two cases that highlight some pitfalls associated with Malyugin ring usage.

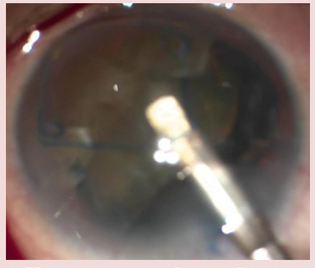


Case 1:

The Malyugin ring was dislodged following hydro-dissection and became entangled with the crystalline lens. Efforts were made to avoid contact between the ring and the corneal endothelium. Phacoemulsification was started and nucleus divided. Once the ring was disentangled, it was safely removed from the eye.



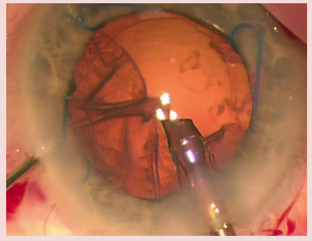
Malyugin ring dislodged after hydrodissection



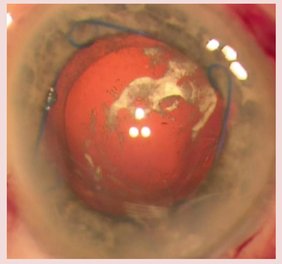
Following nuclear division, ring was freed and removed

Case 2:

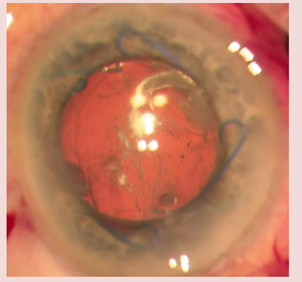
A posterior capsule tear occurred during phacoemulsification. A sulcus intraocular lens (IOL) was implanted before the removal of the Malyugin ring. The ring became entangled with the sulcus-fixated IOL and the ring had to be cut into pieces for safe removal.



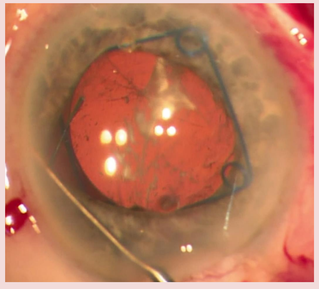
PC tear noted



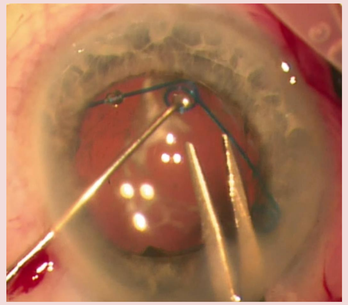
Vitreous prolapse confirmed



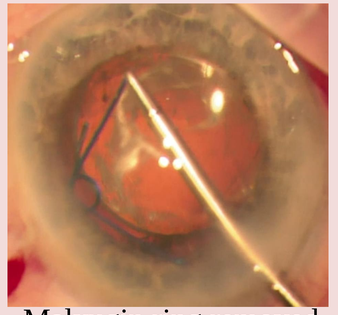
Sulcus IOL implanted with ring in place



Malyugin ring stuck behind IOL



Malyugin ring cut into pieces



Malyugin ring removed

Conclusions:

To avoid complications associated with Malyugin ring insertion and removal, the following pitfalls should be considered.

1- Vigorous hydro-dissection and "flip and chip" phacoemulsification technique should be avoided after Malyugin ring insertion to avoid dislodgement of the ring.

2- Removing the Malyugin ring before inserting a sulcus IOL is recommended to prevent potential entanglement between the IOL and the ring.