PREDICTABILITY OF PRELOADED INTRAOCULAR LENS DELIVERY SYSTEMS: A RETROSPECTIVE STUDY COMPARING THE TECHNIS ITEC PCB00, NIDEK NEX-LOAD SZ-1 AND ALCON ULTRACERT AU00T0

Purpose: To compare the predictability of three commercially available preloaded delivery systems: HOYA iSert 251, Tecnis iTec PCB00 and Nidek Nex- Load SZ-1.
Methods: This retrospective comparative study included patients from an ophthalmic centre in regional NSW who underwent routine phacoemulsift- cation surgery with implantation of the iSert 251, iTec PCB00 or Nex-Load SZ-1 over a 3-year period. A total of 312 eyes were included. All underwent implanta- tion by a single surgeon through a 2.4mm tunnelled scleral or corneal incision. The rate of successful in- the-bag IOL insertion without complication, prob- lems with IOL delivery, and IOLs requiring addi- tional manipulation or replacement were assessed from surgical records. Where available, video record- ings were also reviewed.
Results: 2 out of 78 eyes (3%) implanted with the iSert 251, 12 out of 49 eyes (24%) implanted with the PCB00, and 8 out of 185 eyes (4%) implanted with the SZ-1 experienced issues during delivery. Failed insertions due to introducer malfunction requiring a replacement IOL were noted in 2 SZ-1 and 1 PCB00 systems. 75% of problematic PCB00 deliveries required secondary wound enlargement due to an inability of the injector nozzle to ftt
through the initial incision. This did not appear to be in?uenced by IOL power and type of incision. Notable problems requiring additional manipulation included misdirection of the leading haptic, trapping of the trailing haptic, rupturing of the injector nozzle and cracking of the haptic or optic.
Conclusion: All three systems had issues with pre- dictability of IOL insertion, highlighting the need for ongoing development of preloaded delivery systems.