At the beginning of a new era
How to manage the learning curve of laser refractive cataract surgery

MANHEM/D Laser refractive cataract surgery is a powerful tool and offers the chance to improve the results of modern lens surgery.

1. Docking: The first step to be mastered is the “docking” of the eye to the laser. In some lasers, this is done by lowering a suction piece on the eye directly (e.g., Alcon LenSX), in others, a suction ring is placed on the eye first and the laser cone is lowered onto this suction ring second (e.g., Bausch Lomb Victor, AMO Catalyst, LenSx). It requires a little practice to perform the docking, especially if the respective surgeon has not performed femtosecond second laser LASIK surgery before. Care should be taken to achieve a good central docking without excessive tilt of the eye. Typically, the patient’s head must be slightly rotated away from the operated eye to get the rare with all lasers today that no special instrument to check is required. Should any tags be present, I remove the phaco tip and use a capsulorhexis forceps to complete the capsulorhexis.

2. Modified hydrodissection technique: The third step is to adopt a modified hydrodissection technique. The laser creates air bubbles in the capsular bag, which may increase the pressure in the bag, especially if a small capsulorhexis is used. Hydrodissection should therefore be slow and with long volume to avoid a capsular blow-out syndrome by a sudden increase in pressure.

The nucleus may also be split with a chopper, splitter or hook to let the trapped air escape prior to hydrodissection.

Patient afterdrapping the eye LenSX femtosecond laser on left, excimer laser on right. Zeiss pico operating microscope in the center.

References: