

# Double Extra Sharp Chopper Increase Efficacy of Phacoemulsification for Hard Mature Cataract Surgery

*by Gilbert Ws Simanjuntak*

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**Submission date:** 24-Feb-2023 01:00PM (UTC+0700)

**Submission ID:** 2021866255

**File name:** cacy\_of\_Phacoemulsification\_for\_Hard\_Mature\_Cataract\_Surgery.pdf (106.37K)

**Word count:** 233

**Character count:** 1366

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**PURPOSE:** To assess the efficacy and safety of a modified double extra sharp chopper for removal of hard cataract.

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**SETTING:** Department of Ophthalmology, Christian University of Indonesia/Cikini Church Hospital, Jakarta, Indonesia.

**METHODS:** The study design was prospective non-comparative interventional clinical study. Forty eyes of 25 patients with hard mature cataract grade 3-4 underwent phacoemulsification by single surgeon and analyzed prospectively (grade 4 as the hardest). The pre-modified Koch chopper was sharpened under slit lamp to become extra sharp at the tip and inside edge, thin as a knife, 2 mm in length. **RESULTS:** The mean effective phaco time was  $23.73 \pm 5.75$  seconds. Minimal power was facilitated by using horizontal chopping using self made double extra sharp chopper. No resistance encountered while moving the chopper instead of cataract persistency. Preoperative BCVA were finger counting (47%), hand movement (35%) and light perception (18%). Postoperative BCVA day 1 and day 7 were 0.57 and 0.95 respectively. There is no difference of effective phaco time among nuclear hardness ( $P=0.467$ ) which represents effectiveness of the extra sharp chopper.

**CONCLUSIONS:** Double extra sharp chopper can facilitate a safe, rapid visual rehabilitation, and maximal subject comfort when doing phacoemulsification with old machine for hard mature cataract.

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