Original Research Article

A study of phacoemulsification cataract surgery preference over Small Incision Cataract Surgery in rural eye center of Bodhan, Nizamabad District

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Abstract

Cataract is a major cause of decreased vision in elderly aged population. In rural areas till last decade small incision cataract surgery with IOL implantation is the only surgical option for treating cataracts. In recent past after introduction of the phacoemulsification with foldable IOL implantation is becoming popular surgical technique in urban areas. In our study conducted at rural eye center, phacoemulsification with IOL is gaining popularity over SICS with IOL. This shows increased awareness among the rural population towards minimal invasive surgery and latest surgical techniques regarding better recovery procedures.

Key words

SICS, Phacoemulsification, IOL.

Introduction

Recent advances in phacoemulsification technology, and viscoelasitics and availability of adjuvants have made phacoemulsification possible even in cases with corneal opacities [1]. Cataract extraction is an elective surgery for many poor patients of rural area and gets operated in the free camps organized by Government institutions as well as charitable organizations. SICS (Small Incision Cataract Surgery) with PCIOL (Posterior Chamber Intra Ocular Lens) is a big revolution in cataract surgery. In this technique surgical wound is self sealing after manual removal of cataract. Hence there is no need of wearing heavy aphakic spectacles afterwards [2].

With phacoemulsification technique wound size is very minimal and less post operative astigmatism. In this procedure cataract is emulsified and contents are removed by suction without damaging corneal endothelium. An IOL (Intra Ocular Lens) is injected into the capsular bag.

This procedure is done under topical anesthesia a safe and comfortable procedure for elderly patients with various systemic diseases. There is no need of hospital stay after surgery and a trained surgeon with good equipment this surgical technique is simple and safe. Thus compelling people of rural area to prefer over SICS

Objectives

The present study objective was to evaluate reasons for preference of phaco method over SICS in rural health center.

Materials and methods

The study was done in a rural eye center, Bodhan, Nizamabad District. Data was collected from records of the center from 1999 to 2016.

Inclusion/ Exclusion criteria

Only cataract surgeries done during 17 years were included. Cataract surgeries combined with other surgical procedures like pterygeium and glaucoma were excluded from the study.

Results

From 2000 to 2012 about 32464 cataract surgeries (**Table - 1**) were done by SICS + IOL. In the years 2012-16, 7974 surgeries by SICS + IOL and 12289 surgeries were done by phaco technique, with a shift towards later procedure (**Table - 2**).

Table - 1: SICS + IOL surgeries from year 1999 to 2012.

Sr. No.	Year	SICS
1	1999-2000	260
2	2000-01	569
3	2001-02	815
4	2002-03	394
5	2003-04	1541
6	2004-05	4146
7	2005-06	2992
8	2006-07	3782
9	2007-08	3184
10	2008-09	3123
11	2009-10	4186
12	2010-11	3567
13	2011-12	3905
TOTAL		32464

Table - 2: SICS + IOL along with Phaco surgeries from year 2012 to 2016.

Sr. No.	Year	SICS	PHACO
1	2012-13	2030	2092
2	2013-14	2031	2975
3	2014-15	2160	3557
4	2015-16	1753	3665
TOTAL		7974	12289

Discussion

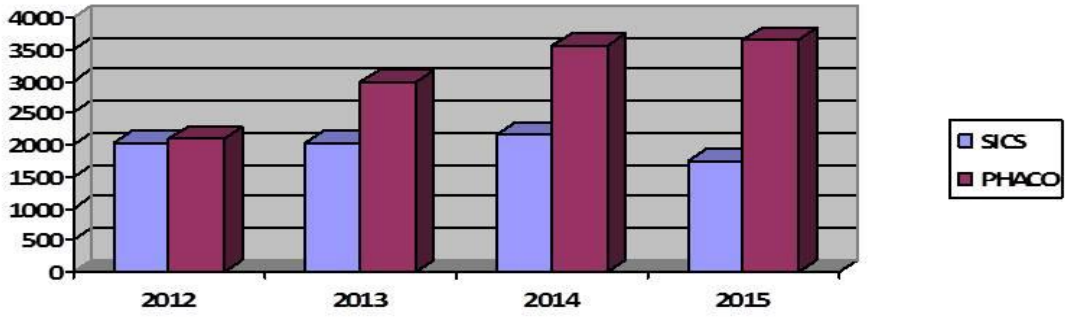
"In a third world country one should have the best equipment to have the maximum turnover while maintaining the highest quality and do so in the shortest surgical time, is the aim in the rural areas", was a quote from Dr. K.R. Mehta,

the father of Indian Phaco surgery [3], in the year 2007, is becoming reality now.

As is evident from the above tables initially there were only SICS surgeries performed ranging from as low as 260 cases in the year 1999-2000 to as high as 4186 cases in the year 2009-10, totaling to 32464 cases. The phaco technique was introduced in the year 2012-13, and gained popularity immediately and outnumbered SICS technique and by year 2015-16 more than doubled the number of SICS surgeries (**Figure – 1, 2**).

Comparing the safety and effectiveness of phacoemulsification to that of SICS, both showed similar results, but for better uncorrected visual acuity in large no. of patients at 6 weeks, in phaco technique [4].

Figure - 1: Changing trends in preference of phaco over SICS.



Conclusion

The reasons for this shift was evaluated in terms of variables such as

- Post operative stay: Minimum of one day post op stay is required for SICS technique, where as phaco technique does not require hospital stay after surgery.
- Less complications: Complications such as post operative astigmatism and endothelial damage are nil or negligible in phaco technique.
- Improved compliance: Patients appreciate good visual acuity and less post op pain after the procedure in phaco surgery.
- Positive feedback from operated subjects: Experiences of patients undergone phacoemulsification technique give positive feedback of the procedure, which in turn motivating other patients for surgery to shift towards phaco technique.
- Early ambulation of cases: Since there is no need of hospital stay after surgery and patients are discharged the same day and advised to continue with their activities of daily living.
- Cost effectiveness: This is the only variable which does not favor phaco technique. But in view of the all benefits mentioned above there is increasing shift of patients in preferring phaco technique over SICS.

Barring cost effectiveness there is significant preference of phaco technique over SICS method for all the benefits evaluated as evidenced in the table-2. Within 2 years of introduction the no. of phaco surgeries increased to more than two fold, and the trends indicate, very soon it is expected to replace the SICS technique.

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