e'News

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From the Editors.....

Technology in the Third World context?

What kind of technology is needed for the eye patients of our country, or for that matter the entire world? This is really the most pertinent question that needs to be addressed at all levels.

The technique of surgery definitely has to be related to the economic health of the society and the people. For, an over invested clinic or hospital leaves either the patient and the society financially bleeding or the investor in a state of mental wreck. This gives rise to a feeling of exasperation and helplessness in the surgeon or results in unholy practices of marketing of the surgical skills and offerings of kickbacks. These traits and practices are despicable in the practice of medicine.

The coaxing to respect the surgeons who are doing clean and effective surgery with minimum of equipment is timely and welcome. I profess to be doing neither the cleanest nor the most effective surgery amongst our brethren. I just happen to be one of those few, who tend to speak out, though at times seemingly with a foot in my mouth. For long, most of us, the so-called lesser-blessed ones have been chided repeatedly by the haves and the industry with questions like - Still not doing Phaco? With your experience and standing, is it not high time you switched over to Phaco??

The practice of surgery in general and eye surgery in particular is as much an art as science.

Hats off! To those, who did not take the adversity of circumstances lying down. In the era of ECCE, inexpensive steel sutures substituted expensive 10-0 buried knot sutures. Later, with the advent of the exorbitantly priced phaco machines, Manual SICS was invented. Both these innovations kept their surgery safe, precise and competitive. The patient is ambulatory at the earliest, without having to spend a fortune.

Nevertheless, one has to have an open mind and has to be out and about time and again, for observer-ships, wet labs, hands-ons, conferences, seminars etc. Regular communication now very convenient is another necessity for constant learning to stay abreast. Webinars, Virtual CMEs etc. are a gift of Covid times and are there to stay.

The contempt for procedures - simple, and equipment - indigenous and innovative, leads us nowhere.

Ranjit S. Dhaliwal, MD, DOMS

Editor, ISMSICS Newsletter Web Editor, ISMSICS

Chairperson, Punjab Chapter ISMSICS



The waters are rough and the winds are strong Times are tough but we must keep going along

We are facing an unprecedented calamity and a stagnation at all fronts, professional and personal. But surely, we shall tide over this darkness with a lot of learnings and experiences in our buckets.

While clinical and surgical work has stopped with a jolt, academics is something which has kept rolling. During the year, ISMSICS has conducted innumerable web events, covering the minutest to the most innovative aspect of the surgery. The events have involved stalwarts from the world over and have touched global corners.

ISMSICS continues to spread its wings through more and more chapter formations and also has a series of academic and scientific activities lined up in its portfolio.

We shall keep unveiling them gradually in an attempt to continually satisfy your academic hunger and at the same time keep you craving for more.

At the moment, we take great pleasure in bringing forth the new issue of the ISMSICS e'Newsletter after the overwhelming response received for the previous issue and the enthusiastic submissions poured in. This issue also heralds the launch of the one-of-its-kind "Global MSICS Training Program".

I hope you find this Newsletter informative and useful and and we again look forward to your comments and contributions.

Dr. Purvi Bhagat

Editor, ISMSICS Newsletter Chairperson, Gujarat Chapter ISMSICS

MSICS -BASICS

MINIMIZING SURGICALLY INDUCED ASTIGMATISM IN MSICS

PROF MANISHA RATHI, PROF AND HEAD GLAUCOMA RIO, PGIMS, ROHTAK

Cataract remains the leading cause of reversible vision loss globally. The surgery for cataract has been evolving and constantly improving through the last few decades. The expectations of the patient have also been changing, with the demand of perfect vision postoperatively. Minimizing surgically induced astigmatism is the need of the hour. It is the general perception that MSICS causes more SIA than phacoemulsification.

Several studies have shown that phacoemulsification has less SIA than MSICS. In a recent study, SIA was compared between patients undergoing phacoemulsification and MSICS through a frown incision. The mean SIA in the phacoemulsification group was (0.7793 ± 0.445) , which was significantly less (p<0.0001) than that in the MSICS group (1.6887 ± 1.473) . In another study by Kagnici et al , the SIA after phacoemulsification was higher $(0.94 \pm 0.47D)$.

In a recent publication by us, SIA was studied in 100 eyes with hard/advanced cataract operated by me, comparison of MSCIS through the Frown incision and Chevron incision was done. The mean SIA was more in the Frown group (0.82D±0.62) than in the Chevron group (0.55D±0.42), which was statistically significant (p 0.017). In the Frown versus Chevron group, the best uncorrected visual acuity was 6/12 or better in 62% and 82% respectively. In our study, the Chevron incision was superior to the Frown incision for MSICS, while both yielded good postoperative results.³

The incision in MSICS is the main factor that determines the SIA. The frown incision has been shown to be superior to the straight incision in MSICS, while the Chevron incision has been shown to be the best. In one study comparing all 3 incisions for MSICS, the mean SIA in Straight, Frown and Chevron incision was found to be -1.08±0.67 D, -0.96±0.71 D and -0.88±0.61 D respectively, estimated 4 weeks after the surgery.⁴

To encourage the young ophthalmologists to practice MSCIS, they should be taught to make the Chevron incision after they have mastered the frown incision.

MSICS has many advantages including the requirement of less equipment and instruments and can be performed in hard/advanced cataracts with ease, to provide good postoperative vision.

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- 2. Kagnici DB, Kocaturk T, Cakmak H, et al. Surgically-induced astigmatism following cataract surgery. Open Journal of Ophthalmology 2015;5(2):47-53.
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MSICS - Technique Talk

2mm MSICS - WHY AND HOW

DR. AMULYA SAHU

There are various factors contributing to less astigmatism in a MSICS: a small incision, steep axis incision, frown incision, incision farther away from the limbus, less cauterization of sclera, proper apposition of incision margin and a temporally placed incision.

In an era when method of cataract surgery is evolving fast, 6 mm incision surgery is more appropriately called Scleral Incision Cataract Surgery (SICS).

2-3 mm incisions are the new norm for Manual SICS. I have developed a technique, where, with an incision of 2 mm, surgery can be done in clear lens, pediatric cataract, grades 1 to 3 cataract with excellent results. For harder cataracts, it is advisable to have a larger incision comparable to the size of the cataract.

The technique:

- Incision is always made on the steep axis, measured with an auto refractometer subsequently confirmed with topography.
- The incision site is marked with the help of Dr. Sahu's marker.
- The conjunctiva and Tenon's capsule are incised separately keeping a frill of 1 mm conjunctiva attached to the limbus.
- Scleral vessels are erased by wetfield cautery avoiding deep cauterization of the sclera.
- A 2mm scleral frown incision is made 1.5mm from the limbus with a crescent blade, with 1 mm back cut on either side of frown incision (Fig.1).
- The crescent blade is moved through the sclera into the corneal stroma following the curvature of sclera and cornea, ensuring the blade remains visible all the time, to avoid premature entry or perforation of the tunnel roof.

- The crescent blade is moved forwards up to 1.5mm into corneal stroma which is separated on either side and a scleral pocket is made till 1 mm behind. The two side pockets are made on either end of the main incision using a MVR blade.
- Capsulorhexis is performed using a 26 g needle from the side port, followed by hydrodissection using Dr Sahu's specially designed single jet cannula. The anterior chamber (AC) is entered through the main port by a self-sealing 3-planar incision using a 2.8 keratome.
- Dispersive viscoelastic is infused into the AC and the nucleus is moved in the bag to make it free from attachments using Dr Sahu's modified dialler inserted through the side port.
- The lens is mobilized into the AC by nudging it through the main entry using the same modified dialler.
- It is then either broken in the tunnel by Dr. Sahu's modified vectis or divided in the AC using the vectis and Dr. Sahu's modified viscoelastic cannula and finally brought out using the vectis. During nucleus delivery, care is taken to avoid the nucleus / nuclear fragments from rubbing against the corneal endothelium. This is achieved by gently pressing the floor of the tunnel down and gradually gliding out the nucleus.
- Cortical cleaning is done through two side ports using Dr Sahu's modified Simcoe cannula.
- The posterior capsule is gently polished and foldable IOL is implanted in the bag either directly or using an injector.
- All visco material is thoroughly taken out from the AC and from behind the IOL with the Simcoe cannula.
- Debri in the anterior chamber angle is flushed out using Dr Sahu's multiple jet cannula.
- The side port and main port are hydrated, an air bubble injected into the AC to help maintain the chamber and the Tenon's capsule and conjunctiva cauterized.

Benefits of this incision:

- It does not induce a stigmatism if there had been no a stigmatism pre operatively.
- In clear lens extraction and pediatric cataract, this is the incision of choice.
- In bilateral sequential same day cataract surgery, it is preferable as the infection chances are less compared to clear corneal incision.
- It can neutralize astigmatism up to 1 D.
- Minimal tissue handling allows for a quiet eye next day.

References:

https://www.youtube.com/watch?v=N2HcUcJOmIE

https://www.youtube.com/watch?v=5ekULklxdv4&t=438s

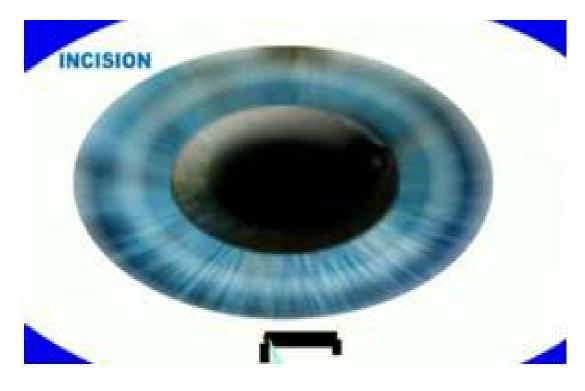


Fig.1. A small 2mm frown incision placed 1.5mm from the limbus

From the MSICS Surgical Tray



LID SPECULUM

DR JAY RATHOD, DR VAIBHAVI PATEL, DR SANKET OZA
II year residents,
M & J Western Regional Institute of Ophthalmology, Ahmedabad.

Under guidance of:

Dr Gunjan Tank Assistant Professor, M & J Western Regional Institute of Ophthalmology, Ahmedabad.

Design and Types:

Lid speculums are mainly of two designs:

- 1) Open end: Consist of fenestrated and solid blade types of speculum.
- 2) Closed end: Consist of wire and guard types of speculum.

The speculums can also be broadly subdivided according to their function into adjustable and nonadjustable types (Fig. 1):

Adjustable:

The adjustable variety contains a guard/locking mechanism with a screw by which the width of the open end of speculum can be adjusted. Examples are Lieberman, Saunders, Murdoch, Mellinger, Knapp, Lancaster, Williams, Castroviejo.

Nonadjustable:

The nonadjustable variety has a spring mechanism. Examples are Wire speculum (Barraquer, Sauer, Alfonso, Kratz-Barraquer)

Pediatric speculums:

Weiss, Sauer, Cook, Alfonso, Barraquer Pediatric Speculum.

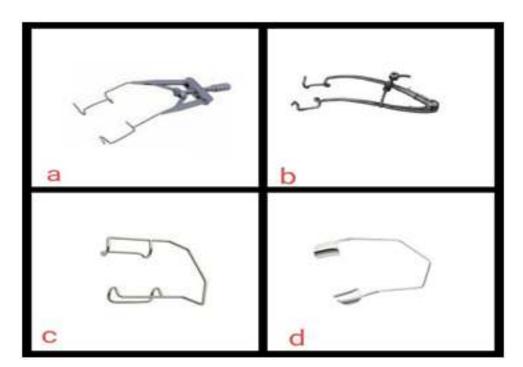


Fig 1 (a) self-retaining universal eye speculum;

- (b) Weiss Eye Speculum;
- (c) Barraquer Eye Speculum (Fenestrated Blade);
- (d) Barraquer Eye Speculum (Solid Blade)

Material:

Speculums are either made up of stainless steel or titanium.

Instrument handling and use:

- After cleaning the surgical eye field and application of eye drape, the drape
 is cut across the center, and the speculum is inserted in such a way that the
 joint end of the speculum is placed temporally and the open end with
 blades faces nasally retracting both the upper and lower lid.
- The lower blades are inserted first retracting the lower lid so that the lashes
 do not interfere with the surgical field, followed by retraction of upper lid
 and insertion of upper blades.
- The Barraquer Eye Speculum is used widely as it keeps both the eyelid margin and eyelashes well out of the operative field.

Precautions during handling:

- Too much increase in aperture and widening of the speculum can lead to pressure on the globe at outer canthus, which can be dangerous during intraocular surgeries, risking increased posterior pressure, vitreous loss and even expulsive haemorrhage in susceptible patients.
- One should be careful while inserting the speculum that its blades should not touch / rub over the ocular surface, especially the cornea.
- Excessive handling of the lids while inserting the speculum must be avoided because of risk of contamination of the operative field.

Instrument sterilization and care:

There is a stepwise approach for processing of the used instrument:

- 1) **Cleaning:** Cleaning is the physical removal of visible blood, discharge, lint fibers, or threads from the speculum with help of distilled water.
- **2) Drying:** Now, the speculum is to be dried with a lint-free cloth and regular hair dryer before the packing.
- **3) Packing:** Rigid containers made up of metal, plastic, or aluminum are used to store these instruments. The storage plates should preferably have perforations for better steam penetration and effective drying during autoclaving.
- 4) Sterilization: This is done by autoclaving.

Recent innovations:

Disposable lid speculum with a drape have been developed for simple and complete draping of the eyelashes and eyelids to ensure an appropriate surgical field.

References:

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Videos:

- 1. https://youtu.be/BkJmVhvu9rE
- 2. https://youtu.be/4ZcU6-604ss



ABOUT HELPMESEE

HelpMeSee is a not-for-profit organization with a mission to eliminate treatable cataract blindness around the world. To achieve this mission, HelpMeSee aims to train many surgeons to perform the Manual Small Incision Cataract Surgery (MSICS). MSICS is a low-cost, safe, and effective alternative to other prevalent surgical techniques, and therefore chosen by HelpMeSee as the preferred procedure for training. At the center of HelpMeSee's training program is a Virtual Reality Eye Surgical Simulator that simulates the complete MSICS procedure. In order to utilize the true potential of the simulator, HelpMeSee has developed a curriculum to complement training on the simulator and thereby achieve the goal of delivering high quality training to cataract surgeons in the shortest possible time.



PROGRAM

MSICS Simulation-based Training Course (MSTC) - ISMSICS - HelpMeSee's bespoke training program for Resident students, Practicing ophthalmologists and Beginner MSICS surgeons. With a curriculum that covers the following surgical tasks:

- Create a self-sealing tunnel
- Remove the cataract
- Implant the IOL
- And hydrate the cornea to seal it

The curriculum leverages the power of the HelpMeSee Eye Surgical Simulator to train on all the steps involved in performing MSICS. Along with skills training on the simulator, students are offered a structured training program that uses several instructional modalities.

INSTRUCTIONAL MODALITIES

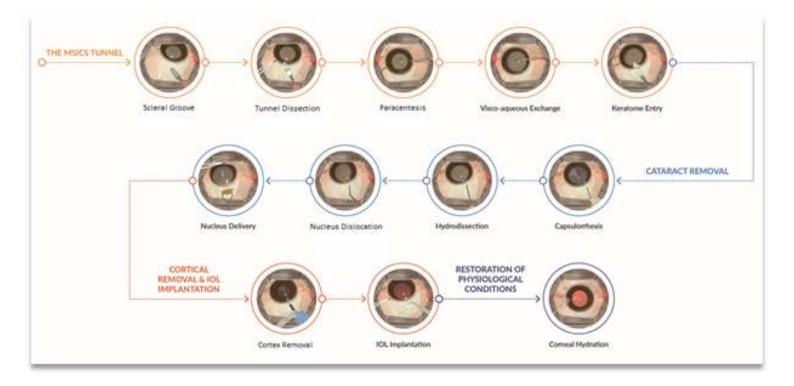
The instructional modalities are designed to meet specific objectives at each stage of learning.

They are:

- An eBook describing each surgical step in detail. This eBook serves as a manual for trainees undertaking the simulationbased training program. It is used as a pre-study material.
- Classroom discussions lead by an instructor to teach the important concepts of the surgical procedure.
- Lab activities to give trainees a hands-on experience of handling the instruments prior to task training on the simulator.
- Simulator-based training guided by an instructor to teach the trainees how to perform each surgical step using the virtual reality simulator.

TRAINING OBJECTIVES

MSTC is based on the HelpMeSee Standardized MSICS procedure.



The objectives of the training program are to:

- Describe the concepts related to MSICS.
- Demonstrate simulator competency to defined standards in making the MSICS tunnel, removing a standard nuclear cataract, performing cortex removal, inserting a PC IOL and restoring the eye to physiologic conditions by hydrating the cornea.

COURSE CONTENTS

The following tasks are covered in the course:

Course	Tasks		
Sclero-corneal Tunnel Construction Course	 Scleral Groove Tunnel Dissection Paracentesis Visco Aqueous Exchange Keratome Entry into AC Complete MSICS Tunnel 		
Capsulorrhexis and Nucleus Delivery Course	7. Capsulorrhexis8. Hydrodissection and Nucleus Dislocation9. Nucleus Delivery		
Cortex Removal and IOL Implantation Course	10. Cortex Removal 11. IOL Implantation		
Restoration of Physical Conditions Course	12. Hydration of the Paracentesis Site		





DURATION

The duration of the curriculum is 6 business days with around 30 hours of training activity.

A high-level training schedule is presented below:

Training Topics	eBook (Pre-study)	Classroom	Simulator
Day 1 Scleral Groove Tunnel Dissection	Chpt. 11 Chpt. 12 & 13	0.5 hour 1 hour	2 hours 2 hours
Day 2 Paracentesis Visco Keratome Entry	Chpt. 14 Chpt. 15 Chpt. 16 & 17	0.5 hour 0.5 hour 1 hour	1 hour 1 hour 2 hours
Day 3 Capsulorrhexis	Chpt. 18 ,19 & 21	1 hour	4 hours
Day 4 Hydrodissection Nucleus Dislocation Nucleus Delivery	Chpt. 22 Chpt. 23	0.5 hour 1 hour	1 hour 1 hour 2 hours
Day 5 Cortex Removal IOL Insertion IOL Dialing	Chpt. 24 Chpt. 28	0.5 hour 0.5 hour 0.5 hour	2 hours 1 hour 1 hour

Day 6 Corneal Hydration Finishing Surgery Simulation Practice Simulation Assessment	Chpt. 29 Chpt. 30	0.5 hour 0.5 hour N/A	1 hours N/A 2 hours 1.5 hours
		8.5 hours	21 + 3.5 hours* * Additional practice + Assessment

INSTRUCTORS

Dr. Ashish Bacchav: Chief Instructor and SME

Dr. Chetan Ahiwalay: Lead Instructor and SME

Dr. Tejas Sheth : Senior Instructor

Ms Shweta Salve : Training Admin

Till the time of sending this content, we have trained 28 post graduate students from varied institutions across the country in this program.

FOR ENROLMENT, fill this form:

https://forms.gle/5KFmN2m8s4Ldg5Bx5



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ISMSICS proudly launches the

"GSICSTP (Global SICS Training Program)"

which is a virtual online training program for ISMSICS members of India and abroad.



GSICSTP has over **127 National Speakers & 20 International speakers** on this platform. These program trainers are renowned faculty from all over the world & their contribution will help us a long way to educate our younger generation and all those interested in learning the art of manual SICS.

We invite you to participate whole heartedly in the **Basic**, **Intermediate**, **Advanced & Innovative** lecture series of this program. The Advanced lecture series would provide great skill enhancement for experienced surgeons while Innovative lectures would provide a platform for research for the young thing minds.

ISMSICS has partnered with "HMS (HelpMeSee)" - SICS Simulator training facility for MSICS training also.

Come -----

be a part of our first of its kind life long academic extravaganza.

For further details, you may email to: admin@gsics.org

Gallery Stroll



Webinar on Founders' Day celebration, Advanced Eye Care Centre, PGI, Chandigarh



ISMSICS Women's Wing Virtual Meet



Installation of ISMSICS US-Mexico Chapter

Webinar by ISMSICS Bangladesh Chapter

ISMSICS **Bangladesh Chapter**



Date: 23rd October, 2020

Day : Friday

Time: 8:00 PM, Bangladesh

7:30pm India, 4:00pm Egypt





Prof. Ava Hossain

Keynote Speaker



Chief Guest & Speaker



Dr. Debasish Bhattacharya

Special Guest & Panelist



Prof. Md. Sharfuddin Ahmed

Special Guest & Speaker





Prof. Hassan Shahid Suhrawardy



Prof. Hossam Ziadah

Panelists



Prof. Md. Mizanur Rahman



Prof. Shawkat Ara Shakoor Milly



Prof. Md. Abdul Quader

Speakers





Speakers & Moderators



Dr. Md. Mostak Ahmed



Dr. Ashraful Hug



Zoom ID: 835 3177 1050 | Password: Dexamox



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Installation of ISMSICS Women's Wing



ISMSICS Karnataka Chapter Webinar series



Certificate awarded to trainee (right) on completion of HMS-MSICS Simulator training



Trainees and Trainers of HMS-MSICS
Simulator training program

Important Links

ISMSICS website:

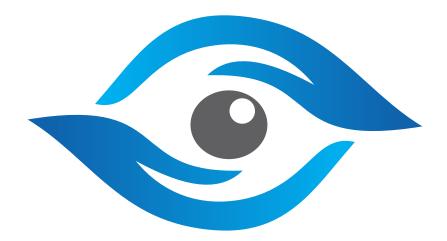
https://www.ismsics.com

ISMSCIS membership:

https://www.ismsics.com/onlinemembership.php

A glimpse of past webinars...

https://www.youtube.com/channel/UCkKamFvQtLCKzsTx1HS58OA



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