



ModernMedicine ModernMedicine Community

Welcome back, Dr. Chang [Edit Your Profile](#) / [Log Out](#)



Enter your keyword

ModernMedicine Recommended Medical Sites

[Home](#) [Clinical Perspectives](#) [Business Perspectives](#) [Patient Care](#) [Learning](#) [Community](#) [Products](#) [Careers](#) [About Us](#)

HOT TOPICS: [Cardiometabolic Disorders & Weight](#) · [Liability & Risk Management](#) · [Health Care IT](#)

[E-mail Alerts](#) [RSS Feeds](#)

Arsenal of strategies enables safe surgery in IFIS eyes

Pharmacological, mechanical techniques can address the wide spectrum of severity

Publish date: Apr 1, 2008

By: Cheryl Guttman

[Email](#) | [Print](#) | [Share](#) | [Save](#) | [License](#)

Ophthalmology Times

- Complete nuclear chopping in-the-bag before removing the chopped fragments to delay using aspiration and ultrasound power for as long as possible.
- One advantage of the diamond configuration is that it pulls the iris down behind the clear corneal phaco incision and out of the way of the phaco tip.
- The 4-0 polypropylene iris retractors are much easier to manipulate in terms of hooking the iris. Cost-effectiveness is another advantage of the 4-0 retractors.

New Orleans—Cases of intraoperative floppy iris syndrome (IFIS) encompass a wide spectrum of severity, so it is important for surgeons to master several different strategies to increase the likelihood of achieving a safe outcome in these eyes, said David F. Chang, MD, speaking at the annual meeting of the American Academy of Ophthalmology.

"Severe IFIS can sometimes present as an unpredictable intraoperative surprise and is always a true challenge when it is unforeseen. Therefore, surgeons need to be prepared to use a staged approach employing complementary strategies and recognizing that some excellent techniques don't necessarily work in all eyes," said Dr. Chang, clinical professor of ophthalmology, University of California, San Francisco.

Pharmacological techniques

The use of the maximally cohesive ophthalmic viscosurgical device (OVD) of 2.3% sodium hyaluronate (Healon 5, Advanced Medical Optics) is a popular approach for trying to achieve adequate pupil viscodilation and iris tamponade. When using this approach, gentle hydrosteps along with low aspiration flow rate and vacuum settings are important to maximize retention of the OVD in the eye, although surgeons still should be prepared to replenish the OVD as necessary to re-expand the pupil.

As another tip, Dr. Chang noted that he will complete nuclear chopping in-the-bag before removing the chopped fragments to delay using aspiration and ultrasound power for as long as possible. Intracameral epinephrine, with or without preoperative topical atropine, constitutes a pharmacologic strategy for achieving adequate pupil dilation and reducing iris billowing and the tendency for prolapse. In addition to being used as a primary measure, it can be supplemented intraoperatively with the addition of the OVD to further widen the pupil, and it represents a good rescue strategy in a case that has proceeded to a point where placement of iris retractors would be difficult, Dr. Chang said.

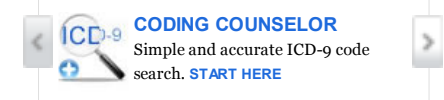
"Used as an initial strategy, intracameral epinephrine may be most helpful in eyes where IFIS is mild to moderate in severity as judged by having a 5-to 7-mm preoperative pupil diameter. It may be worth trying in a more severe case, and surgeons should recognize that those pupils can take 20 to 30 seconds to respond," he commented.

Dr. Chang credited Richard Packard, MD, and David Allen, MD, with first introducing the use of an intracameral alpha-agonist. Although those surgeons in the United Kingdom used phenylephrine, an epinephrine-based formulation for use by U.S. surgeons was popularized by Joel K. Shugar, MD, that involves mixing bisulfite-free epinephrine with balanced salt solution (BSS) or another sterile intraocular irrigating solution (BSS Plus, Alcon Laboratories) in a 1:3 or 1:4 dilution.

"The alpha-agonist acts directly on the receptors of the iris dilator muscle to increase tone and restore the normal iris rigidity that we are accustomed to seeing in surgery involving non-IFIS



Practice Tools



POPULAR ARTICLES

[Weight-based dosing: Extended-release minocycline efficient, predictable](#)

[FDA warns Allergan on Aczone promotion](#)

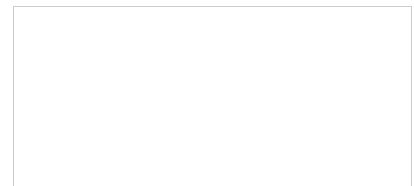
[Exit Accutane: Derms' reactions mixed as Roche pulls long-standing remedy](#)

[Gaining control: Birth control pills, spironolactone first-line treatments for hormonal acne](#)

[Getting to the root: Look below the surface for cause of hyperandrogenetic symptoms](#)

MORE POPULAR ARTICLES

Featured Jobs



[More Jobs](#)

SPONSORED MEDIA

[OTLA Video Player](#)

[Multimedia: Why Patients Considering an IUC May Say YES to ParaGard](#)

SPONSORED

[sponsored multimedia Promiseb A non steroidal topical cream for managing seborrheic dermatitis](#)

[MORE MEDIA](#)

cases," said Dr. Chang.

Mechanical strategies

Iris retractors and pupil expansion rings also can be used from the outset of surgery and offer surgeons a safe and reliably effective method for preventing pupil constriction during surgery.

"These devices can also be inserted later in the case, if necessary. However, it is clearly preferable to decide about their use early, prior to completing capsulorhexis and hydrodissection, when placement easier," Dr. Chang said.

"One advantage is that surgeons can use high vacuum and their usual OVD without any concerns that the pupil will constrict unexpectedly," he added. "And since the pupil in an IFIS eye is elastic and not fibrotic, the pupil can usually be maximally stretched without damage and will return to its normal shape after the retractors are removed."

Dr. Chang said that he likes to use 4-0 polypropylene retractors in the diamond configuration described by Thomas A. Oetting, MD, and Luis C. Omphroy, MD (*J Cataract Refract Surg.* 2002;28:596-598). Compared with 6-0 nylon, the 4-0 polypropylene is much stiffer, and so manipulation of the 4-0 polypropylene iris retractors is much easier in terms of hooking the iris, he said. The advantage of the diamond configuration is that it pulls the iris down behind the clear corneal phaco incision and out of the way of the phaco tip, he said.

"Cost-effectiveness is another advantage of the 4-0 [polypropylene] iris retractors, as they are sturdy enough to be autoclaved and so are reusable," Dr. Chang said. He also mentioned that a pupil expansion ring (Malyugin Ring, MicroSurgical Technology) designed by Russian ophthalmologist Boris Malyugin, MD, appears to be a great new tool for use in IFIS cases. The device is constructed of 5-0 polypropylene, and it is very easy to insert using its dedicated injector system. The injector system is disposable, loads automatically, and also is used for removing the ring at the end of the case.

"Use of this system reliably achieves a 6-mm-round pupil opening that cannot come down during the case," Dr. Chang said. "The collapsible design and thin profile minimizes the risk of hitting the cornea that is present with stiffer and thicker plastic expansion rings"

POST A COMMENT

Please complete the form below to post your comment.

Bold = Required

Email Address _____ Your email address will NOT be published.

Display Name _____ appears with your comment

City _____

State _____

Country _____

Remember me: Yes No

Comment _____ read our [privacy policy](#)

Note: does not support HTML.
All comments submitted are subject to review, and may be delayed before posting. We reserve the right not to post comments.

[Submit Now >>](#)

LATEST PRACTICE NEWS

[Rural Residents More Likely to Have Total Joint Replacement](#)

[Uninsured Show Higher Risk for Death Following Trauma](#)

[Medicaid Enrollment Common Among Overdose Deaths](#)

[Uninsured Children May Be More Likely to Die in the Hospital](#)

[SNS: Web Surfing Linked to Brain Function in Older Adults](#)

[→ More](#)

LATEST DRUG NEWS

[Cetuximab Linked to Resection of Liver Metastases](#)

[H1N1 Influenza Rates Drop in Many States](#)

[Zegerid OTC Approved for Frequent Heartburn](#)

[Observing Antiretroviral Therapy Yields Little Benefit](#)

[Morphologic Changes Gauge Liver Cancer Therapy Response](#)

[→ More](#)

Clinical Perspectives

Acne
Adolescent Medicine
Allergy & Immunology
Alzheimer's Disease
Asthma
BPH
Breast Cancer
Cardiology

Business Perspectives

Coding Counselor
Liability & Risk Management
Health Care Information Technology
Practice Management
Business Operations
Human Resources
Health Law & Policy

Popular Topics

CME/CE
Coding Counselor
eNewsletters
Patient Education Center
Blogs
Discussions
ModernMedicine Radio
Sundication



ModernMedicine

Bringing together Advanstar's trusted healthcare journals along with powerful tools, resource, decision support and advisory functions



[Home](#) | [About Us](#) | [ModernMedicine Team](#) | [Editorial and Advertising Policy](#) | [Our Publications](#) | [Terms & Conditions](#) | [Contact Us](#) | [Medical News](#) | [Medical Articles](#) | [CME Center](#) | [Patient Education](#) | [Practice Management](#) | [All Content](#) | [Privacy Policy](#) | [Terms of Use](#) | [Linking and RSS Policy](#)

© 2009 Advanstar Communications, Inc. All rights reserved.
Reproduction in whole or in part is prohibited.
Please send any technical comments or questions to our webmaster.