The Eighth Annual OPS Election Results

The newly elected OPS officers were announced at the First Session of the OPS Business meeting, October 2, 1977. The results were: President- Johnny Justice, Jr., Vice-President- Gary Barnes, Secretary- Bruce Morris, Treasurer- Bruce Busse and the new members of the Board of Directors are Earl Choromokos, Ditte Jacobsen and Carl Kittelson. Johnny Justice, Jr. resigned as member of the Board of Directors in order to assume his office as President. The President appointed Csaba Martonyi as a new member of the Board to complete the remaining year of Mr. Justice's term.
will go to the appropriate committee and will be included on a future ballot to the members at large.

Second recommendation: Article VI: The Board Section 6.

It shall be the responsibility of the Board to conduct at least two business meetings during the business year. One such meeting shall be held during the week of the OPS annual meeting and shall be announced to the members and open to them. The second meeting shall take place at the discretion of the Chairman of the Board with 30 days notice of time and location given to the members of the Board and to the general members and shall be open to them. All actions of the Board shall be printed in the OPS Newsletter. This recommendation passed by a show of hands and will go to the appropriate committee and be included in a future ballot.

11. Marshall Tyler, Chairperson of the Awards Committee, requested that provisions be made for the program Committee to pay for the lunches of the non-OPS members who attend the awards banquet. This passed by show of hands.

12. Terry Tumer opened discussion regarding the 2/3 majority vote needed to carry a motion included in a ballot. He asked the assembly to consider that due to the poor voter response, the simple majority of the votes cast would be a more effective mechanism. A lively discussion followed. Included were comments by Mary Federico asking to have this recommendation forwarded to the By-Laws Committee for their appraisal. The President asked for show of hands indicating the opinion of the assembly. Majority indicated they were in favor of this recommendation. At this point the Parliamentarian noted that a 2/3 majority of the total membership is required to amend the By-Laws. It was decided that this recommendation would be put into a concrete form and sent through the appropriate committee to the membership at large for their consideration in a ballot form.

13. Carl Kittleson asked the assembly to consider a recommendation that persons wishing to present new business at the annual business meetings be required to submit the topic of discussion to the Chairperson of the Programs Committee to facilitate an orderly agenda and a smooth sequence of events. During the following discussion, several members voiced concern that such a mechanism might inadvertently impede a free flow of ideas necessary for such a spontaneous business meeting. This recommendation was defeated by show of hands.

14. The President announced that the next business meeting would be during the AAOO meetings in Kansas City October 22, 1978, and that the next meeting of the Boards of Directors would be established at a later date.

The President moved that the meeting be adjourned at 12 noon.

Bruce Morris
The OPS exhibit drew large crowds and provided an excellent variety of ophthalmic photographs.

Later, a local television station stopped by to do a story on the exhibit. Of course other displays were included with the story covering the AAOO.
Registration for the Eighth OPS Scientific Session was record size. Pre-registration was available this year for the first time. It proved to be a real convenience for those who utilized the service.

Program Chairman, Csaba Martonyi opened the session by introducing the first speaker.
Standing room only for the Technical Session.

Howard Schatz, M.D. led off this year's OPS Instrumentation Seminar.
Mr. Justice presented a paper on the comparison of 10% vs. 25% fluorescein.

Both fundus photography and slit lamp photography workshops were filled to capacity.
To accommodate the number of participants who registered for the two workshops, two separate sessions were created at the last minute to solve the problem of overcrowding and provide more individualized instruction.

There was adequate time for informal question and answer periods during the "hands on" ophthalmic photography workshops.
Sal D'Anna presented a paper on how to extend the film size on a fundus camera to 70mm.

Marshall Tyler discussed stereo photography techniques when elevated pathology creates a focus problem.
Mr. Justice discussed "second eye" fluorescein techniques and the difference between the Spectrotech E-4, B-5 and the SE 40 and SB50 filters.

Mr. Tomer presented results from personal experience using the new Zeiss Contax RTS compared to the Pentax systems most of us are using. (Want to buy four USED Pentax motor-drive cameras?)
Peter Hoerenz demonstrated the Urban stereo adapter for the Zeiss Photo Slit Lamp.

Comments made by workshop participants were very favorable, demonstrating the continuing need for future such programs and workshops.
OPS 1977 Instrumentation Seminar

by Thomas Van Cader

Howard Schatz, M.D. led off this year's OPS Instrumentation Seminar with a very interesting project, assigning colors to gray scale ranges on a fluorescein angiogram. The results were very interesting, but as he commented, not worth the effort. It was a challenge to do I'm sure. Dr. Schatz did show something worthwhile in the way of photographing surgical procedures through the operating microscope when the surgeon is not using it. To do this the photographer attaches both the video unit and either a still or motion picture camera to the scope and positions it slightly out of the way of the surgeon but in full overhead view of the surgical field. The photographer can use the foot pedal controls for focus and zoom magnification while watching the monitor, and can trip the camera remotely. A very nice movie followed taken by the above method of a retinal detachment procedure to prove that the system works very well.

Ken Julian once again reminded us of the Sherwood Pharmaceuticals Filter Aspiration Needle for use in drawing the dye from the vial into the syringe. The purpose of this is to remove all bits of broken glass which fall into the vial along with any other foreign matter before injecting the dye into the patient. As an aside to the original use of this filter it would appear on the surface that those of us who have been using it for the past several years experience less nausea from
our fluorescein patients. How the two are connected is not clear, or for certain, but it was apparent from the many comments that it is real. I would like to see a study done which would confirm this fact. Any takers?

Bill Bell gave some very important information which needs to be stressed, and that is how to handle your photographic material from beginning to end in a manner that will ensure the original stock will still be useable twenty or forty years from now. This is a very important step for us to keep in mind, too often we allow ourselves to rush jobs through because of pressure from superiors, but keep in mind that each minute you take from the wash step alone cost years in the long run use of that negative. I would like for Bill to publish in this organ his recommended steps for long time storage preservation of photographic material.

Peter Hoerenz demonstrated the Urban stereo adapter for the Zeiss Photoslitlamp and the OPMI-6 surgical microscope. This little beamsplitter gives simultaneous stereo photos on one frame of 35mm film, and can be adapted to most of the common 35mm cameras which can fit Zeiss units. This is a very nice way to shoot stereos if you don't want to mess with storage problems or spend time looking for the missing stereo slide.

Thomas Ager demonstrated a modification to the Photoslitlamp camera which will permit encreased depth of field for the study of the lens by the Scheimpflug method of paralleling the light path and the film plane. This is a very complicated and
costly modification but seems to be the only way to achieve the maximum detail of the lens structure for this type of study. We must complement Tom and his department for undertaking this heroic tasks and producing such excellent results.

Barry Walker and Martin Rothenberg teamed up to give an excellent presentation of the value and limitations of the Pomerantz Equator-Plus Camera. This very unique system has definite applications to ophthalmic photography for those of you who need to capture the entire neurosensory layer in one picture. It's limitations are resolution and patient selection. Excellent media us a must, good dilatation helps. The report and the illustrations were very helpful in this seminar for those of us contemplating the purchase of such an instrument.

Carl Kittelson likes to play with rats, and somehow got to photographing their retinas through one of his original designs, a Hruby lens held against the cornea and an external camera. I must complement his success; however, it seems to me there must be an easier way!

Johnny Justice, Jr. gave a demonstration of the difference between the results of the Spectrotec E4-B5 filters and the newer SE40-SB50 filters. Both looked great to me, but Johnny feels the newer filters yielded a tad better negatives. His second contribution is of great import for those who need to get
maximum detail in the second eye of a fluorescein study. To do this Johnny finds that giving 3cc of dye for the control eye studied and the remaining 2cc of dye at the time you shift to the fellow eye will give an excellent capillary pattern in the second eye when ordinarily the dye is too diluted to achieve this routinely. Base your dosages on the patient and the concentration of dye you are using.

Ron Kacizak handed us several tips on how to shoot polaroid material through the eyepiece head of the Fudnus camera with a Polaroid Super Shooter camera. Very cheap unit that works quite well. Secondly, Ron finds that machining a shorter joy stick enables you to drop the camera on its tilt axis all the way without having to raise it to swing to the other side of the stick. And lastly, for the boon of our profession, Ron has found a quick way to lable slides! Dispos-a-Stamp, at 4 Gold Rush Ct., St. Peters, MO 63376, will send you for $8.75, 100 little lable makers which will lift type from paper and imprint up to 100 slides with the typed material. These little goodies are just the right size to fit 2X2 slide mounts and the image is sharp and permanent. Thanks Ron!

Terry Tomer has run a bunch of film through the new Zeiss Contax RTS camera system and found that they do hold up to constant use, with minor repairs. One point he made is be sure to check the voltage of the batteries each time you have to change
them. Apparently this is the most critical aspect of this very nice camera system. I just sent mine to the shop for a jammed shutter, which they repaired, returned the camera, called me the next day and said to return it, they left out some of the parts and wanted to replace them before I used it. How about that for service!

Dr. Gerald Rogell decided to update his FF-III to take motor driven fluoresceins, but his system did not come with the necessary attachments and power outlets to accommodate this feature. Not to be dismayed, Dr. Rogell, with the expense of $10.00 in microswitches and wiring, plus the expertise in mechanical ability, rigged up his own circuitry and bracket for telling the system whether the motordrive camera or the single frame camera was on the aperture dovetail. It not only functions quite well, it looks like a very professional job. It is so refreshing to find an M.D. who knows how to handle instruments properly!

Marshall Tyler knows a lot about how the visual cortex can fool itself into thinking two channels of vision are the same. By focusing one stereo frame on an elevated or recessed focus plane and the other on a different level the mind "sees" both planes in sharp focus! Very neat idea for those elevated lesions you couldn't get all in focus. There is a limit to the degree of focus shift the mind can handle however, but try it none the less. Your M.D.'s will be astonished.
Sal D'Anna has demonstrated that it is possible to extend the film size on the fundus cameras to 70mm. The alterations are expansive also. But the results were quite impressive to say the least. Sal uses CRT2495 Film for his fluoresceins processed in KLX-Xray developer. For color he recommends Daylight Ektachrome 200, E-6 process.

Frank Lazenby has a very neat photo request form for the referring physician to fill out giving all of the necessary patient info. The form then goes into the patient file for permanent storage and can be added to at some future time as follow up photos are done. I'm sure Frank will share his form with us if you ask him for one.

To all of you who presented material let me give my very heartfelt thanks; and to those of you who gave up that second cup of coffee to attend this early morning session I extend my congratulations and thanks also. I feel that this was a very worthwhile session again this year and am already looking forward to next years seminar. If you have an idea building in the back of your head that you feel the other members would benefit by, please get it ready for the next meeting. I look forward to seeing each of you then.
SUGGESTIONS TO MAKE LIFE A LITTLE EASIER IN THE WORLD OF OPHTHALMIC PHOTOGRAPHY.

RON KACIZAK
RETINA CONSULTANTS, LTD.
QUEENY TOWER BUILDING
SUITE 5103
4989 BARNES HOSPITAL PLAZA
ST. LOUIS, MISSOURI 63110

314-367-1181
POLAROID FUNDUS PHOTOGRAPHY FOR UNDER $40.00.

Most inexpensive Polaroid cameras, such as the Super Shooter Plus or equivalent, can be modified to photograph the fundus through the eyepiece of the fundus camera.

This is accomplished by cutting and stripping one end of a male to male PC cord, and soldering it to the copper contacts on the Polaroids flash cube socket. A 3 or 4 way flash terminal adapter is inserted in the fundus cameras 35MM camera body X flash terminal socket. The fundus camera's PC cord, along with a PC to PC extension cord can then be permanently attached to the body. This will minimize wear on both the PC cords and cameras flash terminal.

When Polaroid photographs are desired, simply connect the Polaroids male PC end to the PC extension cord. Focus the fundus camera as you would for routine fundus photography. The eyepiece on the fundus camera should be set at -1 diopter, with the Polaroids lens set at minimum focus such as 3.5 feet. If a smaller image with a slightly larger field is desired, set the diopter setting to zero on the eyepiece, and the lens setting on the Polaroid should be set at infinity. The Polaroids lens is then placed in contact with the eyepiece of the fundus camera and the Polaroids shutter button is then depressed. This will trigger the fundus cameras electronic flash, and the field of view as seen through the eyepiece will be recorded on the Polaroid film. Power settings for the exposure will vary with the various power supplies and eyepiece heads. We use the Zeiss Fundus Flash 3, with the solenoid-activated swing mirror eyepiece. We have found that flash setting 3, 250w is adequate for normal fundi, while flash setting 4 may be required for dark fundi. The film used is Type 108 Polaroid Polacolor 2. An audible timer such as that incorporated in the Super Shooter Plus Polaroid is very helpful in determining the proper development time for the film.

I have found that approximately 90 to 95% of our patients can be successfully photographed by using this method.


A JOY STICK FOR EASIER PERIPHERAL PHOTOGRAPHY.

The standard joy stick on most Zeiss fundus cameras measure approximately 70mm in height. This height proves to be of great hindrance when the unit is cranked down for peripheral photographs. It is of even greater frustration when the unit is rotated on its axis in the down position and must be rasied enough to allow the strobe housing of the unit to clear the joy stick, and then lowered again to complete the swing.

By unscrewing a set screw and removing the joy stick, we found the joy stick post measured only 30mm in height from the recess where the bottom of the joy stick rests, to the top of the post. We had made for us, a joy stick knob constructed of a Delton plastic material, which measured 37mm in height and 38mm in diameter. The top of the knob is flat, compared to the rounded head found on the Zeiss joy stick.

We have found that the reduction in joy stick height permitted us to obtain peripheral photographs with far greater ease. The replacement of the joy stick does not require any modification to the fundus camera and does not create any greater difficulty in manipulating the unit. The joy stick knob can be fashioned by most competent machinists, or can be obtained commercially through Oak Tree Instrument Co. 4634 Karamar Dr., St. Louis Missouri, 63128
A FAST EASY METHOD TO LABEL SLIDES: "DIS-POS-A-STAMP."

One of the most time consuming tasks involving Ophthalmic Photography, is slide labeling. Proper patient identification printed on each slide is essential to minimize the misplacement or loss of slides. We label all of our patient slides with their name, date photographed, diagnosis, visual acuity, and initials of the referring physician.

The use of a recently developed technique utilizing an aniline dye transfer system, has greatly reduced the time required to label our slides. With this system, the information that is to be printed on the slide mount need only be handwritten or typed only once on a carbon-master sheet. A DIS-POS-A-STAMP is attached to a stamping block, by first removing a backing paper from the adhesive side of the stamp, and then pressing the stamp onto the base of the stamping block. The printing surface of the stamp is conditioned by touching it to a moistened sponge. The water is then distributed over the printing surface by running your finger over the surface until it feels slick. Excessive water on the printing surface is removed by blotting the printing surface of the stamp on a piece of plain white paper. Too much moisture on the printing surface can cause the dye to run or blur. The stamps printing surface is then placed on the carbon print-out on the master sheet and allowed to set for approximately 10 seconds. The longer the the printing surface remains in contact with the carbon print-out, the more dye it will absorb, increasing its printing potential. The stamp is then removed from the carbon print-out and is ready to stamp the slide mounts. This is accomplished by touching the printing surface of the stamp to the slide mount and applying even pressure and then removing. Up to 100 slides can be labeled from the one stamp. When the group of slides have been labeled, the stamp is removed from the stamping block by peeling it off and it is then discarded, and a new one reattached. It should be noted that the stamp will lose its printing ability after approximately 15 minutes. The use of DIS-POS-A-STAMP is not recommended where only three or less slides are to be labeled unless uniformity is desired.

I have found that by using this system, the time required to label our slides have been cut by more than 50%. DIS-POS-A-STAMP can be obtained in kit form, which contains 100 DIS-POS-A-STAMPS, stamping block, sponge, carbon-master sheets, and instructions. Its price is $8.75 and is available for 35mm slide mounts 13 x 50mm, as well as for stereo mounts 30 x 35mm. DIS-POS-A-STAMP can be obtained by writing to DIS-POS-A-STAMP, #4 Gold Rush Ct., St. Peters, Missouri, 63376.

ELIMINATING STATIC DUST BUILD UP ON THE ASPHERICAL LENS.

The use of an anti static agent has proved to be of great help in eliminating static dust build up on the front element of the aspherical lens of the fundus camera. I use Static Guard, which can be obtained in most food or department stores.

Remove the collar that secures the aspherical lens. DO NOT remove the lens itself. Spray the collar with the anti static agent, and allow it to dry before replacing it. Spray the inside of the lens cover and also allow it to dry before replacing it over the lens. Under no circumstances should the aspherical lens element be sprayed.
Dis-Pos-A-Stamp is a fast, easy, and inexpensive method of printing information on slide mounts. Its repetitious printing ability allows you to label a box of slides in about one minute.

The information that is to be transferred to the slide mount needs to be handwritten or typed only once on a carbon-master sheet. This information is then quickly and easily transferred to the Dis-Pos-A-Stamp. Up to 100 slides then can be printed from the single stamp.

Dis-Pos-A-Stamp produces a clean, permanent, uniform print-out on most types of slide mounts. When printing is complete, Dis-Pos-A-Stamp is easily removed from its printing block and discarded and a new one attached.

Dis-Pos-A-Stamp and its printing block are designed to print only on the slide mount.

Dis-Pos-A-Stamp kits are available in 35mm 2x2 (13 x 50mm), slide mount sizes and stereo mount sizes, (30 x 35mm). Special sizes on request.

The Dis-Pos-A-Stamp kits include 100 Dis-Pos-A-Stamps, printing block, sponge, and carbon-master sheets.

<table>
<thead>
<tr>
<th>Patients Name</th>
<th>Date-Diagnosis</th>
<th>V.A. Referring Phy.</th>
<th>Patients Name</th>
<th>Date-Diagnosis</th>
<th>V.A. Referring Phy.</th>
<th>Actual Dis-Pos-A-Stamp print out</th>
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ORDER FORM

I would like to order Dis-Pos-A-Stamp kits for 35mm 2x2 slide @ $8.75 per kit

I would like to order Dis-Pos-A-Stamp kits for stereo mounts @ $8.75 per kit

Please make check or money order payable to Dis-Pos-A-Stamp,
4 Gold Rush Ct.
St. Peters, Missouri
63376
DARKROOM TECHNIQUES
by
Kenneth Christopherson
Kresge Eye Institute
Detroit, Michigan

I. PROCESSING THE NEGATIVE

A. Prepare the solutions: developer, stop bath, fixer.

1. Mix the developer into stock solution.
   Example: D-76 comes in a pouch. Pour this powder into the amount of 
   water as specified by manufacturer at required temperature 
   such that the powder goes into solution without settling. 
   Also, don't let the developer oxidize too much: no shaking.

2. Stop bath. Use either a commercially available stop bath or acetic 
   acid mixed to the film manufacturer's specifications. Also, you can 
   use a water stop bath. This step is important in halting the development process.

3. Mix fixer. I recommend a liquid rapid fixer already in solution: it 
   mixes readily and is a lot faster to prepare. Pour fixer into 1 gallon 
   jug, put in at least 2/3 of the required water. Add the hardener, 
   then the remainder of the water.

B. Bring all chemicals and rinse water to the same temperature.

1. Kodak recommends 68 degrees Fahrenheit as a basic working temperature. 
   In hot climates or in summer months, it might prove impossible to get 
   water temperature as low as this. The upper limit should not exceed 
   75 degrees Fahrenheit. Kodak recommends that the rinse water not be 
   less than 65 degrees Fahrenheit and not warmer than 75 degrees Fahrenheit.
2. A variation in temperature can cause damage to film. Too cold a temperature can cause film to reticulate: large clumping, crinkling. If the temperature exceeds 75 degrees Fahrenheit, the emulsion may separate from the film base.

C. Load film onto reels in a darkroom and put into light tight tanks.

1. In total darkness, open canister with a can opener. Cut off the leader to square off the film end. Hold the film in palm of right hand and with the thumb and forefinger, bow the start of the film and start the reel, rotating and pushing the film onto the reel. After film is loaded, cut off the spool.

2. I prefer stainless steel reels and tanks to plastic one for two reasons:
   1) when the film on the reel is wet, you can reload the stainless steel reel, whereas with plastic, you can't; 2) although initially the plastic reels will be faster to load because they are easier, the stainless steel (once you become proficient!) are actually much faster.

3. Tanks come in many sizes: those holding 1 reel, 2 reels, 4 reels or 8 reels. The largest I use is the 4 reel tank. If the tanks are any bigger, the time required to empty and refill them is too long. Also, the size of the 8 reel tank is awkward.

4. An alternative is to stack reels onto a long wire holder which is used as a handle, to develop the reels in a deep tank. More film can be processed at one time and the development is more uniform.

D. Pour working developer into developing tank after starting timer and agitate.

Example: Again use D-76. The stock solution may be used or diluted 1:1

(1 part D-76, 1 part water: 8 oz. D-76 + 8 oz. water.)
PROCESSING THE NEGATIVE

1. Start timer as you...

2. Pour the working solution into the top of the developing tank as rapidly as possible without spilling.

3. After tank is filled, invert tank holding top in one hand and bottom with other hand. Invert 3 or 4 times in approximately 10-15 seconds. (This is called agitation.) Then tap developing tank onto sink or counter to dispel any air bubbles.

4. Invert tank 3 or 4 times for 10 seconds each minute. When timer is within 20 seconds of the finishing time, pour out the developer.

E. Pour in stop bath and agitate for 30 seconds, then dump.

F. Reset timer for 4 minutes and pour in the rapid fixer. Agitate this every minute, the same as is required with the developer. When the time is up, pour the fixer back into the bottle.

G. Now wash the film by using either a rubber hose pushed through the center of the reels or a special washer.

1. Film should wash for at least 30 minutes.

2. By using a hypo clearing agent, the washing time can be reduced considerably.

H. Different methods of drying the film.

1. Immerse the reel with film still loaded on it into a solution of PHOTO-FLO. Remove film and hold one end higher than the other at about 45 degrees. Let excess water drip off, then hang to dry.

2. Remove film from reel and use either a squeegee (a device with a pair of car wiper blades on either side), or a viscuous sponge, to remove the excess water. I don't recommend the sponge because it is prone to
PROCESSING THE NEGATIVE

picking up grit and abrading the film surface. Then either hang film to dry or use a film dryer.

a. a forced air dryer such as the Kinderman. First put film back onto reel in the opposite way in which it is bending (opposite the way it was on the reel when it was developed).

b. a hot air dryer dries film fast but one must remember to remove the film just as it is dry or the heat will cause it to curl.

I. After film is completely dry, cut into strips of 6 frames (or less, depending upon stereo pairs, etc.). Then put into glassine envelope in order strip #1 (frames #1-6) either on top or bottom and the other strips sequentially stacked (strip #2 on top of #1, etc.).

II. PRINTING THE POSITIVE

A. Preparing solutions: Dektol or D-11 or other appropriate developer, stop bath, fixer.

1. The mixing of stock solution of developers is explained in Part I, A,1.

2. Stop bath is explained in Part I, A,2.

3. Kodak recommends using a different fixer concentration for films and papers. I use a film to obtain a positive angiogram, so I use the same fixer as in developing the negative. The rapid fixer for prints makes 2 gallons instead of 1 when used for paper.

B. Bring all solutions to same temperature.

1. In most cases, darkrooms have large enough sinks whereby the trays or tanks are set into them and a constant temperature is maintained by a continually running water bath.
C. Processing is done with tanks and hangers, trays, or an automatic processor.
   1. Tanks and hangers are used only for film processing. The automatic processor can be used with both film and paper. The tray method is used for both film and paper.

D. Depending upon need: film or paper?
   1. The film is orthochromatic, a lithographic material of extremely high contrast. It can be developed in either Dektol (at no dilution or 1:1, or 1:2 depending upon needed contrast), D-11 straight, or high contrast lithographic developers (not recommended). Since it is orthochromatic, a red safelight can be used while processing.
      a. benefits: 1. can be cut to fit into a slide mount and be protected as is.
                      2. higher resolution than paper.
                      3. easier to use with a magnifier.

   2. Paper is continuously variable from grades 0-6 or as Kodak has revised: from ultrasoft to ultrahard. The harder the paper, the more contrast. The highest contrast paper approaches the contrast possible on litho films. Dektol is the only developer used.

E. Different methods of printing angiograms.
   1. Contact sheets. By laying out each strip side by side, it is possible to contact print 6 strips onto a 8 X 10 sheet of either film or paper. Be sure the emulsion of the processed negative is facing the emulsion of the film/paper!
      a. several types of contact frames are available. A light is turned on above the contact frame and the paper/film is exposed. Any light works: room light, enlarger light, etc. An enlarger is best because of its ability to adjust light by f-stops or exposure times.
b. a contact printer incorporates a light and a timer into one unit. It is the best choice for contact printing because it is much faster and more consistent. More importantly, there is less problem encountered with dust on the angiograms.

2. By using an enlarger, it is possible to enlarge (blow up) every frame to whatever size is preferred: 4 X 5, 5 X 7, etc. But this is not as convenient as a contact sheet - for the photographer or the doctor. Occasionally, only 1 or 2 frames are requested to be blown up from a contact sheet.

3. The best situation occurs when no print is required,
   a. the best resolution of detail is compromised by a second generation print.
   b. also, no further work need be done.

4. The best way to determine how a contact sheet should be exposed is to do a series of prints exposed at increasing half-time intervals (5 sec., 7-1/2 sec., 10 sec., 12-1/2 sec., 15 sec., etc.) until a consistent exposure is achieved. It will be found that denser negatives will require longer exposure times.

F. After exposure, the film/paper is processed in the chemicals you have previously prepared. Kodak recommends an average of about 2 minutes for prints with 3 minutes the longest time for a print to remain in the developer.

The same period of time is appropriate for lithographic films. With hangars, the film is agitated every 30 seconds or so. With trays, development is continuous by interleaving the sheets.

G. From developer into the stop bath for 30 seconds.

1. Many photographers use a running water stop bath instead of acetic acid.

H. From the stop bath into the fixer for about 4 minutes.

1. For film, the required time in the fixer is twice as long as it takes to clear. Put another way, if it takes 1-1/2 minutes to clear the emulsion, another 1-1/2 minutes are required to completely fix.
I. Film/paper is then washed. The lithographic film washes in less than 10-15 minutes. Resin coated paper only requires about 5 minutes.

J. Drying is the last step.

1. Film and paper can be hung and allowed to air dry.

2. There are many commercial print dryers available, incorporating heat to speed the drying time.

3. For resin coated paper and litho sheet film, a large squeegee can be used.
   a. A large squeegee with 2 windshield wiper blades works well.
   b. A single blade squeegee is used by squeegeeing the paper/film on one side while it is lying on a hard surface.

The Eighth Annual OPS Program Included Something New...A Banquet

Mr. William Bell, 1977 OPS Vice President and Program Chairman surprised a lot of members this year with his very well organized banquet. Included were committee reports, awards presentations and lots of good food and entertainment. The entertainment was provided by committee chairpersons and OPS officers!

Bill Bell presenting 1977 OPS President Tomer with newly purchased "Presidential Gavel".
Mr. Bell introducing Awards Committee Chairman.

In the next issue of the OPS Newsletter, it is hoped that a complete Awards presentation report be available.
PHOTOGRAPHY.......OPHTHALMICALLY SPEAKING by Jay Wruck

I would like to change the format for this time and touch on a few subjects I think may be interesting for those who do their own processing. Also, a few ideas to make life easier when doing fundus photography.

For many years I have used the photographic printing paper called Kodak Polycontrast. I have always liked the convenience of multiple printing grades on one single sheet. (ie: very contrasty to flat just be changing the filter) It not only cuts down on stock in the conventional printing grades but allows one to print angiograms in the contact sheet form, make enlargements or angiograms and use it for printing subjects not requiring high contrast. This is ideal for use in a department doing angiography and public information and copy work.

I had a terrible time making the surface gloss of top quality. Instead, I would get more times than not, glossed and unglossed areas. Perhaps even bits of dirt or scratches from the drying tin. Even with an expensive glossing dryer, there were so many variables to interrupt the gelatin emulsion from proper contact on the dryer.

Two or three years ago a printing paper with resin coating was introduced. Unlike gelatin, the resin coated paper produced an automatic high and perfect gloss. The glass is important from both the standpoint of a pleasing presentation of the photograph and adds to the sharpness of the image. The resin coated, RC paper, may be purchased also in multiple printing graded papers. The paper is available through American and European manufacturers. The beauty of resin paper is it eliminates a dryer and air dries to a perfect gloss every time by just hanging it. Though it is slightly more expensive, it is well worth it.

I recently saw an ad in a photography magazine for a film with the same ASA as the popular Tri-X we use for angiographies. The ad said the film produced negatives of extremely high resolution and low grain. Ilford HP5 was the film. I tried a few rolls. I hope you get better results than I if you use HP5. After developing, I could see the unexposed areas between exposures had picked up developer fog. This means the fog lies over the exposed image and the unexposed areas of the film. This produces slightly flat prints as compared to the contrasty ones preferred for angiograms. Both negative material (ie: Tri-X & Ilford HP5) are exposed the same but I noticed if you should push process, the Tri-X remains relatively clearer in the unexposed areas. Additionally, I could not determine any great or significant difference in the grain structure, which is so important in the resolution of capillaries.

For the darkroom tinkerers, have you tried any of the pyrocatechin developers? They develop the highlights (peak of the fluorescein) and once developed, no more chemical action takes place. However, it continues to act on shadow areas like the choroid. This is a compensation developer and the formula for it can be found in the Edward West Book, "The Negative". The resultant negative actually looks rusted.

Do you have trouble with patients who insist upon opening their mouths during lamp or fundus photography? Try having the patient bite on a tongue depressor. It not only keeps the head from lifting off the chin support when the mouth is open but gives them something to do!!

Have you ever had a problem with drooping upper lids? When all else fails, try using a butterfly band aid. Place one end on the edge of the lid and the other end above the eye brow, lifting the lid up out of fundus camera viewing. Be careful not to lift the lid too much so blinking can not take place. Keep the corner moist.

Finally, from my training of ophthalmic photographers, I have noticed consistently a great amount of time is taken just to focus the camera. There is a lot of confusion as to where to focus. Remember the lens system of a fundus camera focuses only at one point at a time. Unlike conventional camera lenses that can produce depth of field, a fundus camera does not. Once you have determined focus on the pathology, it does not change. Nor does the Level. Unless however, the eye is moved to photograph another area. Keep in mind the eye is concave. Stay with the level of the eye being photographed. Constant focusing and readjustment will tire your eyes as well as the patient's.
Letter to the Editor:

After reading the OPS July Newsletter I thought I would write you about the question and answer section by Jay H. Wruck of Ophthalmic Photographic Services and Consultants and offer some criticism. I do not feel that Mr. Wruck has given the proper information and as an OPS member I feel that instruction for our members should be of prime concern.

The second question was the one that I thought needed clarification on Macro Lens vs. extension tubes. Extension tubes used with standard 50mm lens or other focal lengths have more of a problem with distortion and flare than Macro lenses. Resolution alone makes them a better choice. Ask any dentist that uses intraoral photography about the advantages of Macro lenses. Also, in Johnny Justice's book, "Ophthalmic Photography" on page 134, you can read about one of the best Macro lenses on the market. The quality of the results and ease of use alone justifies the expense. I highly recommend the newer 90mm or 100mm Macro lens because it will allow a greater working distance from the subject thus keeping the patient more at ease.

Also, for the novice photographer trying to judge exposure, the chart given would be confusing. Information should have been given to construct ones own chart using their equipment. On Mr. Wruck's third question on color, I feel there is a clear solution. It is true that it is hard to get the same color from film batch to film batch, but if you buy a large number of rolls of the same emulsion each roll is the same in color. For the best results, the film should be put in a freezer or at least refrigerated. This prevents the film from ageing or shifting in color. You can check with your film supplier and get your film (I recommend Kodachrome 25 for its excellent color saturation and fine grain) with the same emulsion number on each roll. If this procedure is followed and camera conditions remain the same (light source, filters, etc.) excellent results can be obtained for studying color changes. From experience I recommend Kodak processing and film because of the best available results of repeatable color quality and from film batch to film batch.

I am glad to see a column such as Mr. Wruck's in our Newsletter, but a little more care should be taken to insure the best information. I think more space should be devoted to such columns and less space should be given to all the certification disputes. Even though certification is an important issue, it should not interfere with our objectives as outlined in our bylaws.

Yours sincerely,

Steven A. Thomas
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The panel members were William Lesco, M.D., Mt. Sinai Hospital, New York City; Norbert Schachter, M.D., Cabrini Health Center, New York City; Johnny Justice, Baylor University, Houston; and Terry Tomer, Wills Eye Hospital, Philadelphia. The moderator was Bob Campanile, Mt. Sinai Hospital, New York City.

The panel first dealt with the merits of angiography versus angioscopy and the topic of overuse of fluorescein dye studies. The discussants agreed that while angiograms are technically better these days, unnecessary studies are being requested and billed for. Some doctors seem to request a fluorescein study to diagnose without performing an adequate clinical examination and others are requesting fluorescein studies because they are too inexperienced to correctly diagnose on the basis of their clinical examination. Not enough attention is given to the health and financial considerations of the patient. Other points mentioned included the use of fluorescein angiograms as a teaching tool and the potential for fluorescein to become a medico-legal necessity for a complete examination. Terry Tomer and Dr. Lesco felt that better education for doctors as to when an angiogram would be directly beneficial to the patient might eliminate some unnecessary studies. Dr. Lesco felt that in situations where the patient was too incapacitated to come to the camera or only simple fluorescence was being looked for, angioscopy only by a competent examiner would be valuable. Angiography would still be necessary in situations such as identifying specific leaking sites for photocoagulation therapy.

A question from the audience concerning the use of consent forms was answered by an informal poll of the panel and the audience which revealed that slightly more than fifty percent of those present used informed consent, with institutions being more likely to use specific consent forms than private offices. Dr. Lesco uses a detailed information sheet, including information on meal timing before an angiography, to provide a type of informed consent and also help eliminate some of the anxieties which patients may feel.

The next topic was to be defining the responsibility of the medical staff or physician in the education of the ophthalmic photographer. However, most of the talk was discussion about whether photographers or physicians should be reading angiograms. The advantages of the photographer interpreting were, saving time in getting reports out, and the expertise the photographer might have due to constant exposure (no pun intended), and experience which a routine (or new) ophthalmologist might lack. The disadvantages were the obvious medicolegal questions and the fact that ophthalmic photographers are not trained in disease (or much else other than photography) as physicians are. Dr. Schachter also felt that being a good technical ophthalmic photographer was a very complex and demanding job without adding interpretation as well.

Bob Campanile then asked if the ophthalmic photographer was, or should be, a photographer first or a member of the ophthalmological team first. Dr. Schachter felt the ophthalmic photographer should probably be only a photographer and Dr. Lesco felt that it was necessary for an ophthalmic photographer to know photography in order to be successful in this field, regardless of any other duties he or she might have. Johnny Justice remarked that the more an ophthalmic photographer knows about ophthalmology and other parts of the clinical examination, the better for the photographer and for the institution. Dr. Schachter and Don Wong (in a floor comment) mentioned the number of ophthalmic photographers who started as, and in many cases still are, ophthalmic assistants or technicians.

In response to a question whether ophthalmic photographers' primary responsibility was to the doctor or to the patient, Terry Tomer answered that the photographer should be most concerned with the patient while the patient was in with the photographer, and he mentioned patient management as an important part of the ophthalmic photographer's job.
Much of the remainder of the discussion dealt with the everpresent problem of certification. Both Johnny Justice and Terry Tomer admitted to being won over to the idea of certification by the Joint Commission on Allied Health Personnel in Ophthalmology as being beneficial and necessary. They felt that the federal government and third party payers would require certification and that JCAHPO, as an already established certifying body, would be a valuable ally to ophthalmic photographers in their desire to become recognized as professionals. Dr. Lesco also agreed that certification will be a necessity but also again raised the point about the number of assistant-technician photographers and mentioned that provisions would have to be made for certifying both types of ophthalmic photographers. One floor comment was that patient costs would be reduced due to certification.

In response to a direct question from Terry Tomer, Dr. Lesco felt that the Ophthalmic Photographers Society has been a positive influence on the ophthalmologic field, through their education programs throughout the country reaching people outside of the teaching hospitals.

Bob Campanile brought up the dissatisfaction of some members and non-members with the disorganization of the OPS and its questions facing ophthalmic photographers. Terry Tomer took this opportunity to mention the possibility of two-year terms of office to give officers more time to know their jobs and still have the opportunity to be effective before passing the office to someone else. Bob Campanile stated he brought the point up to show some potential members that the OPS might have something to offer them. Terry Tomer finished with a statement that democracy takes effort by its members but that things could be accomplished eventually and OPS members should not despair that change is not possible in the Society.

Johnny Justice's final comment was clarification of an important point he had made earlier. He feels that the opportunity to make a presentation at a meeting should not be taken lightly and planned only at the last minute with less than adequate visual materials. He asked that if possible a speaker, especially an ophthalmic photographer, only show those pictures that are the best available.

Chicago Now Has Official Chapter

According to Mr. Earl Choromokos, Northwestern University Department of Ophthalmology, Chicago has formed an OPS and it has been officially approved. The next step Earl says, is to work on a regional group.

Any OPS member or person performing ophthalmic photography in the Illinois area interested in joining such a group, contact Earl Choromokos. His mailing address is Retina Lab., 303 E. Chicago Ave., Chicago, Ill., 60611. Telephone: (312) 649-8156.

Also, Earl is Editor for Ophthalmology Times's "Ophthalmic Images" column. If you possess any photographs, color or black and white, you feel should be seen, this is a great opportunity to submit them for publication. Contact Earl if you have any questions.

Membership Approves Honorary Members

Two outstanding ophthalmologists have been approved by the Ophthalmic Photographers' Society membership to receive Honorary Membership. Congratulations to: Emanuel S. Rosen, M.D., F.R.C.S., Manchester Royal Eye Hospital, Oxford Road, Manchester, England, M139WH

AND

W.M. Haining, F.R.C.S.E., Department of Ophthalmology, 9 Wells Hospital, Ann Medical School, Dundee, Scotland, DD2 IUB.
CLASSIFIED

Looking for a young innovative photographer to help with our work here in West Virginia. Contact: J. Elliot Blaydes, M.D.
The Blaydes Clinic
(submitted 10-12-77) between North and Frederick Sts. on Woodland Ave.
Bluefield, W. Va. 24701

Position Wanted: I am an OPS member with three years experience in ophthalmic photography. I am presently employed by a group in Anniston, Alabama performing ophthalmic photography as well as surgical assistance and dispensing eyeglasses. I am willing to relocate in the southeast but will consider other locations. Sincerely,
C. D. Pavey
P.O. Box 241
Anniston, Alabama 36202
Telephone (205) 820-4923

Wanted: Used Donaldson Camera. Contact: Stephen Bistner, D.V.M.
685 Roma Ave.
Roseville, MN 15003

For those who ordered OPS T-Shirts -
There has been a delay - shirts will be sent as soon as possible.

For Sale: Zeiss Power Supply FF3 with ignition unit, Polaroid Camera -
Adaptor and KW58 contrast filter.
Excellent condition - $2000.00
Contact: Randy Forbes (714) 294-6244

Wanted: Any used Leicas - Contact: Csaba Martonyi (313) 763-4498

The following information is yours for future reference. Please retain for OPS inquiries and communications.

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OPS member learns belly dancing while attending AAOO meeting, October 1977, Dallas