



RECONSTRUCTIVE MICROSURGERY

Message from the Program Chairman

Plan for Warm Sands and Hot Topics at Annual Meeting in Miami Beach

Only three months left to go until the 15th ASRM Annual Meeting! Since we said our goodbyes in Hawaii, we've been busy putting together the next meeting scheduled for January 8-11 in Miami, Florida, and now have just about everything in place.

For the scientific portion of the meeting, we had well over 120 papers submitted, with many from our colleagues overseas. The Program Committee has selected 90 of these for presentation in the meeting sessions, and it promises to be a rewarding scientific program. The program has been formatted so that all sessions will end by 1:00 pm, allowing us to enjoy the city and surroundings of Miami. Saturday we will have a combined session with the American Association for Hand Surgery,

PROGRAM CHAIR



Chris Pederson, MD

with instructional courses, two panels, and several invited guest speakers. The panels will cover Advances in Brachial Plexus Surgery, chaired by Sal Shenaq, and what promises to be a lively discussion on the merits (and possible demerits) of the recent hand transplant done in Louisville, chaired by our colleague Warren Briendenbach, MD. Sunday morning will consist of a paper session on extremity surgery, with appropriate research papers.

On Monday, we will begin with instructional courses and then the papers will be divided into two concurrent sessions cov-

ering research and more papers on extremity reconstruction. Monday's session will end with our annual "not to be missed" Founder's Lecture given by Allen Van Beek, MD. Tuesday will be similar to Monday with instructional courses early, and a single paper session to follow emphasizing head & neck and breast reconstruction. A number of poster presentations will be available for viewing, as well as the technical exhibits. We encourage all members to visit the technical booths, both for informative purposes and to thank those attending for their support of our meeting.

The venue for this meeting is the spectacular multicultural city of Miami. South Beach, site of the Loews Hotel, boasts wonderful Art Deco architecture and a wide beach with warm blue water. Besides the beach, there's excellent dining and shopping in the vicinity. The cuisine ranges from "New World" to "Nuevo Latino", Florida stone crab to French and is available any time of the day or night. The shopping is world-class as well, with everything from Armani Exchange to The Gap, and several pedestrian malls are close by with many smaller specialty shops. For



**Luxurious hotels afford fantastic views of the
Atlantic off Miami Beach.**

continued on page 2

Newsletter Seeking Good Tips from Members

The *Reconstructive Microsurgery* newsletter primarily serves to inform the members of the American Society for Reconstructive Microsurgery of upcoming national and international microsurgery meetings as well as providing a synopsis of past meetings and symposia. However, the Council and the Education Committee are committed to encouraging the entire membership to consider submitting technical tips of clinical microsurgery to the membership newsletter. Obviously, this is not a peer-reviewed journal, but many of the fine nuances of microsurgery are never reported in formal journal articles. This newsletter should serve as an interactive forum through which members can provide technical tips and pearls of wisdom that can be easily disseminated to other younger members of the society. For years, the American Society for Surgery of the Hand has solicited surgical techniques and clinical anecdotes from alphabetical groups of its members. Approximately thirty of these Correspondence Letters are sent to each member every three months. We would like to institute a similar but voluntary system of submission to the *Reconstructive Microsurgery* newsletter itself.

Because it may be difficult to get a paper accepted in the *Journal of Reconstructive Microsurgery*, *Microsurgery*, *Journal of Hand Surgery* or *Plastic and Reconstructive Surgery*, think about submitting your tips, ideas or clinical experiences to our own

EDITOR'S MESSAGE



Neil Ford Jones, MD

This newsletter should serve as an interactive forum....

Reconstructive Microsurgery newsletter. (For some examples of great tips by members, see page 10 of this issue.) Similarly, we would also be interested in any member's experience of visiting microsurgical units overseas or performing microsurgery as a volunteer in under-developed countries. So get out your pens, dictaphones, word processors or voice activated computers and submit something for the next issue!

RM

Annual Meeting

continued from page 1

those with a more adventuresome spirit, a number of sports activities are available in close proximity. These will kick off with the annual golf tournament on Saturday, and there are at least 15 golf courses within easy driving range (so to speak.) If baiting a line is more to your taste, try deep sea fishing from one of the many boats in Miami harbor or charter a guide to try your luck at bonefishing the flats.

All in all, the millennium meeting of the American Society for Reconstructive Microsurgery promises to be an exciting one. I hope that all of our members and other surgeons interested in microsurgery will attend and enjoy the outstanding scientific and social programs. We look forward to seeing you in Miami in January!

RM

Chris Pederson, MD
Annual Meeting 2000 Program Chair

RECONSTRUCTIVE MICROSURGERY

The mission of the American Society for Reconstructive Microsurgery is to promote, encourage, foster and advance the art and science of reconstructive micro-neurovascular surgery; and to establish a forum for teaching, research and free discussion of reconstructive microsurgical methods and principles among members.

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Mid-Year Board Meeting Report

Members will be pleased to know that ASRM is having a productive year, evidenced at the Mid-Year Council Meeting.

Summary of the Mid-Year Council Meeting

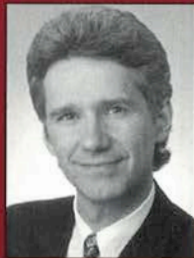
The council convened via conference call on Saturday, July 31, 1999. All were present with the exception of Dr. William Pederson who was unable to participate. Vice-President Randy Sherman, MD, who joined the call from Brazil, reviewed his progress with organizing the Godina Fellowship. The council discussed the objectives and goals of the fellowship, agreeing that it should be accessible to international members. The following parameters were outlined:

- 1) The Godina Fellow will serve one year, beginning at an annual meeting, and travel up to four weeks.
- 2) One of the fellow's destinations will be Ljubljana, Slovenia.
- 3) The fellow will give a summary report at the Annual Meeting which ends the fellow's term.
- 4) The next Godina Fellow will be named at the Annual Meeting.

Dr. Sherman will present further details to the council in November. He and Dr. Nagle discussed the five Godina Lecture candidates, all of whom were quite qualified, ensuring a fascinating 2000 Godina Lecture. As the other officers made their reports, a few decisions were made. The newsletter will be reduced from three issues a year to two, to be published in the early Spring and late Autumn and five member resignations were accepted. Dr. Scott Levin presented the Treasurer's Report, which reflected a positive financial position for the Society. Once the 1998-1999 fiscal year audit has been released, further review will be conducted. The council also discussed the invoice received from the former management service, Associated Management Services and decided to seek a compromise which takes the lack of service provided ASRM into consideration.

The Council was quite pleased with the progress and activities of the ASRM com-

PRESIDENT'S LETTER



Daniel J. Nagle, MD

The Council was quite pleased with the progress and activities of the ASRM committees.

mittees as detailed in the committee reports. On page 4, you can find the results of a busy Bylaws Committee, these proposed changes will be up for vote at the ASRM Business Meeting in Miami. Some highlights from the committees' activities include an on-line home for the Clinical Guidelines and Outcomes Studies website, early planning of a

Multidisciplinary Lower Extremity Reconstruction Meeting, and approval of a site for the 2002 Annual Meeting, the Westin Caesar's Park in Cancun, Mexico. ASRM will find an increased voice through the recent appointment of an ASRM Liaison to the AAHS Time and Place Committee, through the increased responsibility of the Vice-President who will fill that role. Dr. Keith Brandt and the Ad Hoc Electronic Communications Committee are moving the abstract submission and rating process on-line. In 2001, this process will be conducted entirely on-line and on-line meeting registration will soon follow. As you can see, the year has been a productive one and we have the dedication of members, who have been so generous with their time, to thank for it.

Countdown Begins to the 2000 Annual Meeting!

The planning for the 2000 Annual Meeting in Miami Beach, Florida, is going smoothly and we are confident that this year's program will be one of the best, thanks primarily to Dr. Chris Pederson. You will be woefully sorry to miss it, especially considering that we have spoken to God and been guaranteed great weather. So call the gorgeous Loews Miami Beach Hotel and make your reservation! **RM**

Coauthored by Erika Monroe Kane

Invitation for Suggestions to the Nominating Committee

Nominating Committee Chairman David T. W. Chiu, MD is requesting recommendations for nominations for the ASRM officer positions for 2000-2001. ASRM members are encouraged to forward names for consideration for the following positions:

- President-Elect
- Vice President
- Treasurer
- Council Member-At-Large (1 position open)

Please send a letter or fax to:

David T. W. Chiu, MD
Columbia-Presbyterian Med. Center
161 Fort Washington #601
New York, NY 10032-5715
Phone: (212) 305-8252
Fax: (212) 305-4156
Email: dtc1@columbia.edu

ASRM Proposed Bylaws Changes

The proposed bylaws changes, put forth by the ASRM Bylaws Committee, have been reviewed and approved by the ASRM Council. The membership will vote on these proposed Bylaws changes at the Annual Business Meeting, to be held at 12:30 p.m., January 10, 1999. The proposed changes are as follows:

Article IV Membership

Section 1.

(g) Candidate Members

Article IV Membership

Section 2. Founding Members

The "Founding Council" have selected an initial group of individuals who, because of their qualifications and achievements, were elected to Founding Membership during the first official meeting of the Society held in Atlanta, Georgia, February 4, 1984. ~~A number of additional Founding Members shall be added. These members will have the same rights and privileges as the active members.~~

Article IV Membership

Section 5. Corresponding Members

C. Rights and Privileges

- 1) Shall have the rights and privileges of the Society but may not ~~vote or hold office or sit on committees.~~
- 2) Shall pay the required entrance fee and annual Corresponding Membership dues.
- 3) Shall be required to pay registration fees for meetings they attend.

Article IV Membership

Section 10. Candidate Membership

A. Qualifications: Candidate Members

1. Shall express an interest in microsurgery.
2. Applicants must be enrolled in or have completed a residency program that includes microsurgery training.
3. Candidate member must apply for Active membership status within 1 year of board certification otherwise there will be a loss of membership.

B. Application Procedure

1. Are to be proposed and sponsored in the same manner as active members.

C. Rights and Privileges of Candidate Members

1. May attend scientific meetings and social functions
2. Can not serve on committees
3. Can not vote or hold office
4. This category is valid for 5 years.
5. Applicant must pay a \$25.00 initiation fee.

Article VII Committees

Section 1. Standing Committees

D. Clinical Guidelines

1. Composition
 - a) The Chair of the Clinical Guidelines and Outcomes Committee shall be appointed by the President
 - b) Length of term is ~~one year~~ two (2) years
 - c) This committee shall consist of 2-4 active members.
 - d) Length of term is ~~one year~~ two (2) years
 - e) Members are eligible to serve 3 consecutive ~~terms~~ 2 year terms.

Article VII Committees

Section 1. Standing Committees

K. Electronic Communications Committee

1. Composition
 - a) This committee shall consist of four active members.
 - b) The length of term is three years.
 - c) Committee members may not serve more than three terms.
 - d) The length of the Chairman's term is two terms.
 - e) The Chairman may serve as ex-officio for one term.
2. Duties
 - a) The committee shall maintain and up-date the ASRM Web Site.
 - b) The committee shall evaluate and determine the content and direction of the Web Site and its services.

Article VII Committees

Section 1. Standing Committees

L. CPT/RUC Committee

1. Composition
 - a) This committee shall consist of six active members.
 - b) The length of term is three years.
 - c) Committee members may not serve more than three terms.
 - d) The length of the Chairman's term is two terms.
 - e) The Chairman may serve as ex-officio for one term.
2. Duties
 - a) The committee shall create new CPT codes as needed.
 - b) They shall edit existing CPT codes as needed.
 - c) They shall present changes of CPT nomenclature to the AMA CPT Editorial Panel.
 - d) They shall conduct surveys to determine relative values for new CPT codes.
 - e) The committee is responsible for presenting the results of surveys to the AMA/RUC/PEAC.
 - f) The committee shall assist ASRM members with coding questions.

**American Society for Reconstructive Microsurgery
15th Annual Meeting
South Beach, Florida**

Program-at-a-Glance

Friday, January 7, 2000

3:30 pm - 5:00 pm ASRM Outgoing Council Meeting

Saturday, January 8, 2000

AAHS/ASRM Joint Day

6:30 am-5:00 pm Speaker Ready Room

6:30-7:00 am Continental Breakfast

7:00 am-4:00 pm Registration

7:00-8:00 am Instructional Courses

7:00 am-12:00 pm Posters Exhibits

8:00 am-2:00 pm Exhibit Hall

8:05-8:15 am Presidents' Welcome
William Swartz, MD
Daniel Nagle, MD

8:15-9:15 am Joint Panel I: "Management of
Brachial Plexus Lesions"

9:15-9:45 am Presidents' Lecturer
Alfred Berger, MD

9:45-10:00 am Break

10:00-11:00 am Joint Panel II: "Hand
Transplantation"

11:00 am-12:15 pm Adjourn

12:15 pm Golf Tournament - Depart Hotel

12:00-5:00 pm AAHS Poster Tear Down
ASRM Poster Set Up

7:00-11:00 pm AAHS/ASRM SoBe Soiree

Sunday, January 9, 2000

6:30 am - 5:00 pm Audio Visual Theater

6:30 am - 5:00 pm Speaker Ready Room

6:30 am - 8:00 a.m Continental Breakfast

6:30 am - 2:00 pm Registration

7:00 am - 1:30 pm Poster Exhibits

7:00 a.m - 7:05 am President's Welcome
Daniel Nagle, MD

7:05 am - 7:10 am Welcome
Chris Pederson, MD
2000 Scientific Program Chair

7:10 am - 7:55 am Panel I: "Aesthetic Considerations
in Free Flap Reconstruction"

7:55 am - 8:15 am Presidential Address
Daniel Nagle, MD

8:15 am -1:00 pm Paper Session A

8:00 am - 2:00 pm Exhibit Hall Open

1:00 pm - 5:00 pm Resident/Fellows Symposium

Monday, January 10, 2000

6:30 am - 5:00 pm Audio Visual Theater

6:30 am - 5:00 pm Speaker Ready Room

6:30 am - 2:00 pm Registration

6:30 am - 8:00 am Continental Breakfast

7:00 am - 1:00 pm Posters

7:00 am - 7:55 am Instructional Courses

8:00 am - 8:45 am Panel II: "Technology - Its
Application to Microsurgery"

8:45 am - 9:30 am Godina Lecturer
Gregory R.D. Evans, MD

9:30 am - 12:00 pm Concurrent Paper Session B-1

9:30 am - 12:00 pm Concurrent Paper Session B-2

12:00 pm - 12:30 pm Founders Lecturer
Allen Van Beek, MD

12:30 pm - 1:00 pm ASRM Business Meeting

7:00 pm - 8:30 pm ASRM Reception

Tuesday, January 11, 2000

6:30 am - 2:00 pm Audio Visual Theater

6:30 am - 8:00 am Continental Breakfast

7:00 am - 8:00 am Registration

7:00 am - 7:55 am Instructional Courses

7:00 am - 12:30 pm Posters Exhibits

8:00 am - 8:45 am Panel III: "Microsurgery -
Surviving the Agony of Defeat"

8:45 am - 12:30 pm Paper Session C

12:30 pm - 1:30 pm ASRM Poster Tear Down

12:40 pm - 3:00 pm ASRM Incoming Council Meeting

Coding Procedures Without Specific CPT Codes

By Mark J. Buehler, MD

Although the new 1999 American Medical Association CPT book is quite complete, there are still some rare procedures that are not coded. CPT codes and their respective relative values, as determined by the AMA RUC and HCFA, in theory apply to Medicare patients. For better or worse, many payors now use this system for their commercial products. Surgical procedures not commonly performed in the general population and even less commonly done in the Medicare population occasionally do not have a CPT code.

As with any procedure without a CPT code, one may submit the bill using the unlisted procedure code for the region of the body related to the surgery performed. For example, the unlisted procedure CPT code for the humus and elbow is 24999, for the forearm and wrist 25999 and for the hand and fingers 26989. These codes are listed as the last code in each section of the CPT Manual. This technique of code does have some problems. First, the surgical report must be sent with the HCFA-150 form and this report must be very complete if appropriate reimbursement is to be expected. Another option is to create new CPT codes for these rare procedures. This is a difficult and financially risky option to choose. To create an adequate data base to appropriately value these procedures is nearly impossible considering how few are performed each year in the United States. With a poor data base it is very difficult to get relative value assigned to these rare procedures in a neutral budget environment. The best option is to use the current CPT terminology available using multiple codes which best describe what was done. This technique is not exact and is open to interpretation but it is often the best option for the surgeon. This *Coding Corner* will list some of these surgical procedures and how one might code these procedures without a specific CPT code.

During the formation of the ASRM web site Carolyn Kerrigan MD, the chief architect of the site, pointed out three procedures not currently coded for in the 1999 CPT manual. This list includes free

vascularized nerve graft, scalp replantation, and free functional muscle transfer. In addition, the free fibula graft for avascular necrosis of the femoral head is a procedure without a specific CPT code. This *Coding Corner* will give you some examples on how one might code these uncoded procedures.

Free Vascularized Nerve Graft

The free vascularized nerve graft could be approached as either a free tissue transfer that involves a neurotomy with a nerve graft or a neurotomy with a nerve graft that involves two vascular anastomosis. Unfortunately, there is no longer a generic free tissue transfer code list in the 1999 CPT manual. So listing the free vascularized nerve graft as a neurotomy with a nerve graft that involves two vascular anastomoses would be the most reasonable approach. If the vascularized nerve graft was for the arm and greater than 4 cm then code 64893 (nerve graft, single strand, arm or leg; more than 4 cm in length) would cover the nerve graft part of the procedure. Code 69990 (use of operating microscope) would cover the use of the microscope and the microdissection of the nerves and vessels. Then CPT code 3520, twice, (repair blood vessel, direct upper extremity) would code for repair of the artery and vein of this free tissue transfer. This technique of coding would cover all aspects of the surgery.

Scalp Replantation

Another uncoded but occasionally performed surgical procedure is the scalp replantation. Since it's so rarely done, it would be nearly impossible to do an adequate survey to determine relative value for creation of a new CPT code. With these constraints, creative use of the current CPT codes or use of one of the unlisted codes are the choices available to the surgeon. The unlisted procedure codes available and somewhat appropriate would include codes 17999 (unlisted procedure, skin, mucous membrane and subcutaneous tissue) and 21299 (unlisted craniofacial and maxillofacial procedure). Another option is

to use a free tissue transfer code such as CPT code 15757 (free skin flap with microvascular anastomosis) and then use code 69990 for the dissection of the scalp vessels. Normally code 69990 would not be used with a free flap code but in this case it would be appropriate.

Free Functional Muscle Transfer

The free functional muscle transfer is another seldom done surgery without a CPT code. Again, one could use the unlisted procedure code 20999 (unlisted procedure, musculoskeletal system, general) and file a very complete operative note with the HCFA-150 but an expanded use of the current CPT codes is probably a better idea. This procedure is really a series of three procedures. First, a free muscle flap without skin with microvascular anastomosis—CPT 15757. Then the nerve component of the surgery is really a nerve graft (harvest of the gracilis or any other functional muscle would require dissection of the nerve to the muscle and the dissection of the recipient nerve. This would be coded using CPT code 64892 (nerve graft, single strand, arm or leg, up to 4 cm length). CPT 69990 would be added for the microdissection and for the use of the microscope. The final stage of the surgery is the transfer of the tendons to the free functional muscle. In the usual case of the gracilis to the profundus tendons CPT code 25310 (tendon transplantation or transfer, flexor or extensor, forearm and/or wrist, single; each tendon) would be used four times. Using this type of thought process, codes can be used for this uncoded procedure.

Free Fibula for AVN of Femoral Head

The last relatively common micro-surgery procedure which does not have a specific CPT code is the vascularized free fibula for avascular necrosis of the femoral head. Since first done by James Urbaniak, MD, more than a decade ago, it has become more common and is being performed in multiple centers throughout North America. Again, an unlisted proce-

An Amazing Summer of Symposia

ture could be used but coding for the multiple steps, each with their own specific code, is a more specific way to describe the surgery. Code 20955 (bone graft with microvascular anastomosis; fibula) would describe the vascularized bone graft. Code 27075 (partial excision of bone; deep subfascial or intramuscularly) would cover the intramedullary debridement of the necrotic bone in the femoral head. Finally, code 27170 (bone graft, femoral head, neck, intertrochanteric or subtrochanteric area; includes obtaining bone graft) would describe the harvest and placement of the cancellous chip into the femoral head.

Unfortunately, all of our microsurgical procedures do not have unique and specific CPT codes. The coding options available are limited. One could use an unlisted code and send a very complete operate note describing the procedure in as much detail as possible. However, many payors do not like this method of billing. They find it impossible to track and categorize what they are paying for. The other option, the one I believe is best, is to use the CPT codes which best and most accurately describe what is done in each stage of the surgical procedure. This allows for an exact and detailed description of what is actually done. **RM**

Visit
the
ASRM website:
www.microsurg.org

**Find information
about the 2000 Annual
Meeting, the Loews
Miami Beach Hotel,
other meetings
and events, ASRM
membership
applications, and
more!**

Eye-Openers Abounded at the ASPN Meeting

By Saleh M. Shenaq, MD

The Ninth Annual Meeting of the American Society for Peripheral Nerve was held on June 19-21, 1999, in Los Angeles. The meeting was a great success from both the scientific and interactive aspects. Highlights of the meeting were the scientific presentations made by renowned national and international guest speakers representing 11 countries, including Canada, France, Germany, Greece, Israel, Italy, Japan, US, Taiwan, Turkey, and Austria.

The theme of the meeting was management of common and complex clinical problems in peripheral nerve surgery and the new and advanced research in this field, especially in the areas of gene therapy and neuroregeneration.

Dr. Nath, the scientific program chair, along with his committee organized this outstanding scientific meeting with 47 free papers and two panels on composite tissue/hand transplantation, moderated by Dr. Susan Mackinnon and nerve graft substitutes, moderated by Dr. Lee Dellon. Several eye opener break-out sessions were held, including molecular biologic techniques in peripheral nerve research and electrophysiology for assessment and management of peripheral nerve injury. In addition, four outstanding lectures were given on "Diversity of neuronal nicotinic acetylcholine receptors" by Dr. Mariella De Biasi, "The FreeHand system in upper extremity paralysis" by Dr. Ross Nathan, "Personal perspectives in peripheral nerve surgery" by Dr. Susan Mackinnon, and "Metabolic imaging in neuronal injury" by Dr. Brian Ross.

The 10th annual meeting will be held in January 2001 in conjunction with the American Association for Hand Surgery and the American Society for Reconstructive Microsurgery. We look forward to your participation. **RM**

Experts Focus on New Diagnostics and Treatments for Brachial Plexus Injuries

By Saleh M. Shenaq, MD

The Brachial Plexus Symposium was held on June 22, 1999, in Los Angeles as a jointly sponsored meeting of the American Association for Hand Surgery and the International Society of Reconstructive Microsurgery, and endorsed by the American Society for Peripheral Nerve. This one-day international symposium was a resounding success. The meeting highlighted expert knowledge in state-of-the-art diagnosis and management of obstetrical and adult traumatic brachial plexus injuries, which were discussed and disseminated among the participants. There were 14 national and 7 international speakers of renowned repute in this field who contributed to the scientific program. In addition to the 20 scientific paper presentations, the experiences of international centers for the treatment of obstetrical brachial plexus were presented. Our international speakers included Dr. Alfred Berger (Hannover), Dr. Giorgio Brunelli (Italy), Dr. Thomas Carlstedt (London), Dr. Howard M. Clarke (Toronto), Dr. Hanno Millei (Vienna), Dr. Christophe Oberlin (France), and Dr. Bruce Williams (Canada). Dr. Julia Terzis moderated a panel on the management of difficult obstetrical brachial plexus cases with discussion by the panelists offering their personal opinions and approach. New diagnostic techniques were presented for discussion on topics such as magnetic resonance neurography for preoperative evaluation, intraoperative EMG and evoked response studies, and intraoperative histochemical staining. New management approaches including selective neurotization, cross C7 transfer, free intraplexal neurotization and ulnar nerve transfer were discussed. The importance of C8 reinnervation and free muscle transfer and secondary reconstruction procedures were among the topics highlighted. Our interna-

continued on page 8

Summer of Symposiums

continued from page 7

tional speakers included Dr. Alfred Berger (Germany), Dr. Giorgio Brunelli (Italy), Dr. Thomas Carlstedt (London), Dr. Howard Clarke (Toronto), Dr. Hanno Millesi (Vienna), Dr. Christophe Oberlin (France), and Dr. Bruce Williams (Montreal). Dr. Saleh Shenaq and Dr. Julia Terzis were co-chairs and organizers of the meeting, and there were more than 100 participants. A poll of the audience highly recommended repeating such an international symposium every other year, which attests to the success of this meeting and the importance of this topic among concerned disciplines.

RM

A Small Group of Surgeons that Made a "World of Difference"

By William Shaw, MD, FACS

This past June, 170 microsurgeons from 30 countries attended a one-week symposium entitled "A World Summit of Microsurgery: Past, Present, and Future" at the Century Plaza Hotel in Los Angeles. Starting with thirty-some members in 1972, the International Society of Reconstructive Microsurgery (ISRM) group has met every 2-3 years ever since its inception. This year's symposium was chaired by ASRM member Dr. William W. Shaw, Professor and Chief of the UCLA Division of Plastic and Reconstructive Surgery.

During this recent meeting, the group summarized the tremendous advances during the last quarter of the century and debated about future developments. Instead of rigidly programmed presentations, the ISRM encourages extensive spontaneous discussion amongst the members using four different projectors, video, and computer presentations. Through such discussions, surgeons were able to exchange ideas with their colleagues from different continents very quickly, resulting in wide-spread advances in reconstructive microsurgery throughout the world—benefiting many patients with damages from cancer, trauma, or congenital abnormalities.

The main attraction of the meeting has always been the discussion of many creative applications used in various difficult clinical situations, similar to artists exchanging ideas and concepts. Some of the interesting ideas presented include transferring a nerve from under the rib to help patients with high spinal cord injury to breathe without a respirator and the end-to-side hook up of nerves to provide motion without sacrificing function in the donor nerve. A new nerve operation was reported to help young patients with congenital absence lack of facial nerve function smile again. Innovative nerve reconstructions are now able to help patients with brachial plexus palsy use their paralyzed arms again. Dr. Ralph Manktelow of Canada presented a paper analyzing the component of an "attractive smile," making suggestions to surgeons on how to get better results from reconstruction.

Bone with blood supply is now transferred routinely for many applications all over the body to substitute for missing bone in the leg, shoulder, jaw, and foot. The fibula bone, the smaller second bone of the leg which is used extensively for making jaw bones, is now utilized to make a new penis, thus avoiding the need for artificial implants for stiffness.

It appears that there are many "spare parts" available to be transplanted from one part of the body to another for various reconstructive needs. Dr. Shaw and his group at UCLA reported that, in California, 25% of the women needing breast reconstruction are too thin to have sufficient bulk from the abdomen; in these cases, they have utilized the "spare tires" or other fatty tissue from the buttocks, hips, back, and thighs (outer and inner) to make new breasts without implants. Surgeons from Japan reported using the appendix to reconstruct the urethra (the urinary duct) within the penis. Toe joints are used for wrist joints or elbow joints. Dr. Allan MacLeod from Australia transplanted salivary glands to the eye to produce saliva for correction of dry eye syndrome. Dr. Joe Upton of Boston transplanted forearm tissue to the neck to "prefabricate" a flap for nose reconstruction. Tiny flaps have been transplanted from the ear to the nose or from the forearm to the fingers. Dr. Gupta from India reported seven free flaps in one patient for the reconstruction of the lower

abdomen and penis. The youngest patient to have a free flap done was only 45 days of age. The oldest patient for free flap surgery was 91 when he had a flap to cover the exposed brain after tumor surgery. Indeed, the human body can be taken apart and reassembled in many different ways. This is a new kind of "body contour" surgery.

The main attraction of the meeting has always been the discussion of many creative applications used in various difficult clinical situations, similar to artists exchanging ideas and concepts.

The surgeons also had serious discussions about the long-term results, changing standards, and changing practices of various operations. The UCLA group reported that a patient who donates his/her own blood prior to a flap surgery is seven times more likely to receive that blood transfusion, as compared to a patient who did not. Thus, the risk of complications from auto-donations may not be warranted, since a transfusion is very often not needed.

Dr. Shaw and his UCLA group reported a remarkable success rate of 99.5% in their experience in the last ten years with over a thousand microvascular free flaps. This demonstrates that, today, a free flap surgery can be done with a great deal of confidence and ease. Surgeons also reviewed the long-term result of leg replantations to define their current indications.

New technologies were introduced. The television and endoscope are utilized to perform the repair of artery and veins (anastomosis) through small incisions at a distance. The actual anastomosis is facilitated by the use of couplers using two

continued on page 12

ISRM Winds It Up In True L.A. Style

The Set:
Los Angeles, California

The Theme:
**The Grand Finale for the
International Society for
Reconstructive Microsurgery**

The Venue:
**Brachial Plexus Symposium &
International Society for
Reconstructive Surgery
Symposium**

The Brachial Plexus Symposium orchestrated by Shenaq & Terzis drew a far more enthusiastic, energetic and colorful audience than anticipated. It was an overwhelming success and a tribute to the renaissance in brachial plexus surgery through advanced microsurgery. The ISRM Hollywood reception on Tuesday evening began the festivities. Celebrities from all around the world gathered to see and to be seen. One could spot the Baudets proudly bearing the ISRM presidential medal. Past presidents were also in abundance. Founding father and first president, Dr. Hanno Millesi with his wife, was seen discussing the developments in microsurgery and how we could continue to move forward. His audience of other past presidents of the organization included Buncke, Castro Ferreira, Strauch, Tamai, Chen, Taylor and Biemer. The pillars of microsurgery that built the organization assembled to celebrate its accomplishments. The evening sported good food, California wines and renewed friendships.

The next day (Wednesday), the Symposium began in earnest. Symposium Chair, Bill Shaw and Scientific Program Chair, Neil Jones, set the tone and the ground rules for this grand finale of International Microsurgery. The morning spoke of nerves and muscles, whereas the afternoon spoke of jaws and other bones. The stage was set with Buncke applaud-

ing Tamai, and Frey giving us a glimpse of what the future will hold.

Thursday was also a day to remember. Staged near Hollywood, state-of-the-art breast reconstruction was seen. The incredible strides in head and neck surgery then followed with a remarkable outline by our Scientific Program Chair, Neil Jones. The morning was science, but the afternoon was pure fun. Santa Monica Beach will never be the same after the invasion of the microsurgeons. Culminating a century of fun on Santa Monica Beach, there stood our own Dr. Terzis in command. While some enjoyed the beach party, others enjoyed one of the greatest art spectacles in the world - the Getty Museum. This structure encompasses all aspects of art. The structures themselves are architectural wonders and the construction dedicated to preserving the paintings is incredible.

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From automated window lighting adjustments to cooling airflow systems, the museum is a 21st century wonder of architectural design and genius. State-of-the-art restorations, state-of-the-art educational facilities, and of course, state-of-the-art viewing galleries for paintings, photographs and decorative arts from the 13th century to the present, can be seen. Those who had a glimpse of the Getty have witnessed one of man's premier accomplishments.

The scientific sessions resumed on Friday and culminated in the fabulous banquet of Friday night. This was the major social event of the Symposium. The food was in keeping with an L.A. class performance. Honors were given to the founding fathers of the International Society for Reconstructive Microsurgery who have set the stage for microsurgical development throughout the world. Presentations on the life accomplishments of Dr. Zhong-Wei Chen from Shanghai, Dr. Hanno Millesi from Vienna, and Canada's own Dr. Harry Buncke, from San Mateo, California. With pride, they received their awards and it was with pride that our Society loudly applauded. Although these are giant figures in microsurgery, they are warm, compassionate, dedicated human beings to whom we all have had an opportunity to interact and to whom we all owe an incredible debt of gratitude. The spirit of unity was apparent as we mingled, chatted and made plans for the future. This final banquet of the ISRM punctuates the accomplishments of the microsurgical world community.

The next day witnessed the final act. Scientific sessions on research, lymphedema were then followed by a seemingly limitless wrap-up by our president of the limits of microsurgery. The ingenuity, persistence and tremendous dedication of microsurgeons world-wide was celebrated in this unusual presentation. As the final curtain fell at noon on Saturday, each participant took away memories of what has been accomplished, where we have come from, and ideas as to where we shall go in the future. The ISRM will be no more as it fuses with the IMS to form the new, exciting, World Society for Reconstructive Microsurgery. It is with great enthusiasm we embrace the new organization as it will lead the way for international microsurgery of the future. **RM**

**Ron Zuker, MD, FRCSC, FACS,
FAAP**

Colleagues Offer Real Solutions to Real Situations

To the American Society of Reconstructive Microsurgery membership:

We are once again including the popular column of clinical microsurgery tips, pearls, and anecdotes, sponsored by the Education Committee of the Society. To kick off this exchange, we have new tips as well as some of the best ones from those submitted in 1995. I strongly encourage all the Microsurgery fellows and members of the Society to forward their ideas or suggestions for this column to me directly or to Anne Behrens at VisOrient@aol.com.

Geoffrey L. Robb, MD

TIP #1

Frequently in free tissue transfer there is some doubt about venous flow after the clamps are released. The vein may appear dilated and tense. There may be slightly excessive bleeding from the flap itself. The "strip" test is useless because the head of pressure always propels blood into the stripped segment despite an obstruction further on. You know that the anastomosis is patent, but is there an obstruction downstream in an undissected region?

There is but one infallible way—which, pending protest letters of prior authorship, may be termed the Boyd test—of setting one's mind at rest. Simply compress the draining vein beyond the anastomosis with either a hair clip clamp or your finger. With another finger, preferably an index, feel the tension of the dilated vein as it leaves the flap. If the pedicle is long enough, gently pinch it between thumb and index to assess tension. Then, suddenly release the clamp or the obstructing finger. If there is flow, there will be a sudden collapse in the tension of the vein leaving the flap. This is dramatic and easily palpable. If there is no flow, the vessel will remain tense.

If the test indicated flow, it is safe to leave the operating table to allow the flap (as well as yourself) to have a drink. When you return, arterial and venous flow

should have equilibrated giving you no further cause for concern.

— Brian Boyd, MD

TIP #2

Heparin-saline irrigation is employed during microsurgery to prevent tissue dessication and improve vessel exposure and patency. Based on the work of Cox, et al, 50,000 units of heparin are added to 500 cc Lactated Ringers solution to achieve a concentration of 100 units of heparin per cc of RL. A Delta-Flow (tm) continuous flush device made by Utah Medical Products is connected to the solution with IV tubing. A blunt angled irrigating tip is attached to the flush device. The fluid bag is placed with a blood pump, which is pressurized to 250 mm Hg. The flush device has a valve which can be pressured to release the irrigating solution under pressure. This provides a continuous source of irrigation and eliminates bulky irrigating bulbs or syringes. I find this continuous irrigating system particularly helpful during the venous anastomosis.

— Grant W. Carlson, MD

TIP #3

Whenver feasible, I harvest the skin graft which will be used to cover a muscle free flap by excising a long full thickness skin ellipse at the muscle harvest site donor incision. It is usually possible to obtain an adequate size skin graft to cover any small or medium size muscle flap. This approach works well at the latissimus dorsi and gracilis donor sites, and also works nicely at the rectus abdominis donor site when a lower transverse incision is used.

A long elliptical skin excision is planned along the usual muscle harvest donor incision. The width of the ellipse is that which will allow later primary closure without excessive tension. This skin ellipse is excised through the full thickness of skin and subcutaneous tissue, and then saved in moist sponges for later conversion to a split thickness skin graft. The muscle flap is harvested in a routine fashion through this widely opened incision. At the conclusion of the muscle harvest, there is enough

undermining of the skin that the elliptical defect can be readily closed primarily.

I convert the full thickness skin ellipse to a split thickness graft using an electric Padgett dermatome. The skin ellipse is placed on the back table with the skin side up, the skin surface is cleansed and lubricated with mineral oil, one end of the ellipse is grasped with a forcep, and the electric Padgett dermatome is simply passed over the ellipse at the desired thickness (usually 0.015 to 0.020 inches). This split thickness graft is then applied to the transferred muscle flap in a standard fashion.

— Michael A. McClinton, MD

TIP #4

During flap harvest, it is possible to produce intimal injury due to undue traction on the pedicle. This may go unrecognized until the anastomoses are completed and no flow is noted half way up the donor vessel. After flap harvest, I flush the donor artery with heparinized saline and look for easy, unobstructed perfusion of the flap and prompt appearance of the perfusate in the donor veins. Any obstruction to flow is an indication for investigation of the pedicle for intimal injury.

A second reason to flush the flap with heparinized saline is to locate most suitable vein in the pedicle for the microvenous anastomosis. Usually one of the paired vena comitantes of the donor flap pedicle is larger and shows up promptly with a heparin flush and indicated the preferred outflow tract.

In free flap transfer, I generally hook up a single artery and vein, even if a second vein is available in the donor pedicle. Once the anastomoses are completed and clamps removed, good venous outflow is usually noted through the open second vein. A microvascular clamp is now placed on this vein and the flap is allowed to perfuse. The donor site closure is then completed. The vascular anastomoses are checked again visually for inflow and outflow. Bleeding through the second vein after clamp removal assures me that inflow is adequate. If outflow through the microvenous anastomosis is comprised,

release of this venous clamp also decompresses the flap before revision of the venous anastomosis. If everything looks good, a small hemoclip is simply placed across the second vein before wound closure.

— B. Sekhar Chandrasekhar, MD

TIP #5

I have been using the implantable venous Doppler probe routinely on free flaps since July 1998. This has made free flap monitoring easier. In addition, this has picked up several problems in the operating room that probably would not have been detected until later. An example is a recent free flap breast reconstruction. The patient had a skin-sparing mastectomy with immediate sensate deep inferior epigastric perforator flap reconstruction. The internal mammary vessels were used. Following placement of the venous Doppler probe, an excellent venous signal was obtained documenting good flap perfusion. The flap was then inset leaving a small skin island for postoperative monitoring and later use with nipple/areolar

reconstruction. As I was leaving the operating room before the dressings were applied, we lost the venous signal. The skin island looked slightly congested, but probably would not have been noticed otherwise. The sutures were removed, the flap mobilized, and the pedicle inspected. This demonstrated a twist of 180 degrees of the internal mammary vein. The anastomosis was taken down, rotated, and reanastomosed. The patient's course was uneventful following the revision of the venous anastomosis.

— Robert J. Allen, MD

TIP #6

When harvesting a fasciocutaneous flap, find the vascular pedicle first. This may take a little longer but I believe it is safer if you are not very familiar with a flap. I tell this to all my residents and I believe it helps avoid raising a flap that doesn't include the pedicle. I find this particularly useful with the radial forearm flap and the scapular/parascapular flap.

— Neil Fine, MD

TIP #7

Following completion of the microsurgical anastomoses, in almost any recipient site, there is always the concern about the tension on the vessels, and the actual positioning and stability of the vessels in relation to the flap. Special care must be taken to avoid kinking or twisting of the vessels. In some cases the position of the artery can compress the vein and adversely affect venous drainage. To counteract some of these effects, I often take small pieces of Gelfoam to help position both the artery and the vein relative to one another and also to eliminate kinks or twists by simply placing the Gelfoam in a way that supports and positions the vessel in a gentle curve rather than a twist or kink. The placement of the Gelfoam facilitates stability of the vessels once moistened with surrounding tissue fluid and blood. I have used this approach for years quite successfully and feel it can be a significant help for the "inset" of the vessel pedicle in relation to the recipient area of the flap.

— Geoffrey L. Robb, MD

Announcing the

4th Annual Day at the Links

being held in conjunction with the ASRM and AAHS Annual Meetings

Saturday, January 8, 2000

1:00 pm Shotgun Start, Presidential Golf Course

Cost: \$150.00

Registration Deadline:

5:00 pm, January 7, 2000

Cost includes: Greens fees, cart rental, transportation, box lunch and 2 drink tickets

Prizes: Cash prizes will be awarded for lowest gross score for a team, as well as for the longest drive, longest putt and closest to the pin

For more information, call 312-236-3307.



4th Annual Day at the Links

Registration Form

NAME _____		
ADDRESS _____		
CITY _____	STATE _____	ZIP _____
PHONE _____	FAX _____	
HANDICAP (If HC is not known, please indicate scores from the last three rounds of golf played) _____		
Payment Method	<input type="checkbox"/> VISA	<input type="checkbox"/> MASTERCARD <input type="checkbox"/> CHECK
CARD NUMBER _____	EXP. DATE _____	
SIGNATURE _____		

Please fax this back to the AAHS/ASRM Central Offices at 312-782-0553 or mail to, AAHS/ASRM, Golf Registration, 20 N. Michigan Avenue, Suite 700, Chicago, IL 60602.

Symposiums

continued from page 8

rings that snap together, microscopic staples, tissue glues, or laser. Gene therapy is explored to increase the local presence of TPA (tissue plasminogen activator) to decrease the chances of blood clotting in these minute vessels. "Tissue engineering" techniques using various growth factors are utilized to make new bones to the size, shape, and quality desired. Within a few years, we would like to be able to make different tissue or combinations of tissue before transplanting them for reconstruction. Digital images and telemedicine appear destined to have a large role in the future.

It is clear that, today, clinical microsurgery is no longer experimental or risky. Replantation or nerve surgery is routinely done with excellent results. The meeting's retrospective look at microsurgery showed a number of important advances over the last two decades, which had great impact solving many different reconstructive problems:

1. Transferring of tissue from one part to another part of the body can be highly successful.

2. This "free flap" technique can utilize different "spare parts" for reconstruction of damaged parts from all over the body: scalp, nose, ear, jawbone, breast, muscle, long bones, penis, etc.
3. A very important development in the last decade or so is the concept of "immediate reconstruction" for all forms of damages from cancer or trauma. In the past, many patients with cancer of the jawbone or breast had ablative surgery but were left not reconstructed. They lived with deformity and shame. At UCLA for instance, 90% of the mastectomy patients now have some form of immediate reconstruction to restore their shape and emotional well being.

The only "dark cloud" in the otherwise congenial and upbeat symposium was the discussion of socio-economic issues worldwide. While much of the world accepts struggling for healthcare, in the developed world, we generally assume that any patient with cancer or trauma will be able to be restored to optimal appearance and function. With today's managed care bureaucracy, there is clearly an increased barrier for patients to be authorized for such surgery. The severely depressed reimbursement of surgeons' fees (sometimes

20% of the fees of a few years ago) also discourages surgeons from continuing with these extremely difficult, time-consuming, and stressful operations. Many reconstructive plastic surgeons, for instance, have drifted away from reconstructive microsurgery to perform cosmetic surgery. It will be an unfortunate irony that, at a time when we finally have the capability to solve many of the difficult reconstructive problems to achieve better restoration of the human body, many patients may be denied such benefits and there may be few surgeons available to perform such operation. **RM**

ASRM Microsurgery Calendar

January 8-11, 2000
16th ASRM Annual Meeting
Loews Miami Beach Hotel
South Beach, FL

January 13-16, 2001
17th ASRM Annual Meeting
Loews Coronado Island
Coronado, CA

RECONSTRUCTIVE MICROSURGERY

20 N. Michigan Avenue, Suite 700
Chicago, IL 60602

Inside this issue:

15th Annual Meeting Preview	1
President's Message: Mid-Year Board Meeting Report	3
Proposed Bylaws Changes	4
Program-at-a-Glance	5
Coding Corner: Rare Procedures	6
Wrapups of Summer Symposiums	7
Microsurgical Pearls	10

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