THE AMERICAN SOCIETY FOR RECONSTRUCTIVE MICROSURGERY

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RECONSTRUCTIVE MICROSURGERY

What's New in Reconstructive Microsurgery for 1998?

By Mark A. Schusterman, MD

he fourteenth Annual Meeting of the American Society of Reconstructive Microsurgery was held from January 10-13 at The Phoenician Resort in Scottsdale, AZ. Those members who were fortunate enough to attend saw and heard the state of the art in reconstructive microsurgery. There were sixty-eight oral presentations and forty-eight poster presentations as well as the Founder's Lecture by Dr. H. Bruce Williams, and the Marco Godina Memorial Lecture by L. Scott Levin, MD. This was truly one of the more educational meetings for the society to date. Unfortunately, time and space does not permit me to provide a detailed review of all the presentations, all of which were excellent. The purpose of this article is to try and update the

membership concerning what's new in plastic surgery by providing highlights of some of the presentations at the meeting.

Hand and Upper Extremity

The Saturday scientific session was a joint session together with the American Association for Hand Surgery. The meeting started off with the description of a new flap for coverage of the elbow based on anconeus muscle. This muscle receives its vascular supply from the posterior interosseous vessels, the medial collateral vessels, and the posterior branch of the radial collateral vessels. The authors showed that this muscle flap could be used to cover defects around the elbow without loss of elbow motion stability or strength.

This paper was followed by a somewhat controversial paper describing the use of free flaps performed in the outpatient setting. In this series, Roger Khouri, MD and his group from Miami described the use of extremity free flaps in twenty patients who were admitted to the hospital for less than twentythree hours. The patients and their families were taught how to monitor the flap for infusion problems. Although in this small series the patients did well, in the discussion afterwards some members in the audience verbalized their concern that by overly interpreting this paper and concept, some observers may extrapolate this concept to include that all free flaps should be done in an outpatient setting. Despite these concerns the paper is important in that it shows a trend towards microsurgeons becoming more and more cost conscious in providing this highly complex and technically challenging surgery much more efficiently.

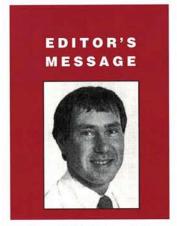
The next paper was a description of a suprafascial elevation of the radial forearm flap by Fu-Chan Wei, MD and the group from Chang Gung Memorial Hospital and Medical College in Taipei, Taiwan. This was a prospective descriptive

Outgoing President
William Swartz, MD (left) is presented
with his President's plaque by incoming
President David Chiu, MD.

Living Beyond Minutia

very once in a while, it is wise to sit back and take an objective view of one's life. We tend to become so involved in the day-to-day minutia that we can at times overlook the most important things. As microsurgeons, minutia are our thing, but let's look beyond that. Let us not forget the treasures of life that we should nurture, the pleasures of life that we should pursue and the meaning of life that should guide us to hopefully higher standards. It only takes "one little wafer" to an already overstressed, overindulged, overworked individual to cause it all to come crashing down with disastrous consequences. So every once in a while we should take a look around us at the real world and put our lives in perspective. We should enjoy what we do, do it well and yet leave space for our treasures and pleasures. RM

Dr. Zuker (second from right) and Dr. Swartz enjoy a light-hearted moment with their next generations at the ASRM Annual Meeting.



Ronald M. Zuker, MD

Let us not forget the treasures of life that we should nurture....



New ASRM Executive Director Ready for the Challenge

andra (Sandy) Huntman-Royer, the new Executive Director of ASRM, was formerly the Associate Director of the Illinois Principals Association, an organization of more than four thousand members. Sandy was successful in taking this organization to a new level of professionalism through her hands-on, entrepreneurial style. The IPA substantially increased their membership as well as their revenues from a four-hundred thousand dollar budget to a million dollar budget in less than five-years. Sandy's tenure also included coordinating programs with the two national affiliations. Before that, she was the education/meetings coordinator for the Illinois Community Bankers Association and member services and sales director for the Illinois Press Association. Sandy is quickly assessing the needs of the membership and its leadership and looks forward to a long affiliation with the ASRM. RM



SANDY HUNTMAN-ROYER

The Proof is in the Data

t is indeed a privilege to serve as the 14th president of our society. It will not be an easy job to live up to the high standards set by my predecessor, Dr. William Swartz, as evidenced by the highly successful and best attended annual meeting ever at The Phoenician in Scottsdale, Arizona. However, it is on the strength of the solid foundation laid down by our founder and our senior statesmen that we charge into the future with confidence and strength. We will advance boldly into the ever expanding horizon. I thank you for your faith, your trust, and your support in bestowing upon me the honor of leading our society. In return, I pledge to you my utmost dedication.

Beginning as a dream, microsurgery has evolved into a resounding success in reality. Moreover, microsurgical capability has become a hallmark of excellence for any healthcare delivery system. In fact,

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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David T. W. Chiu, MD

Editor

Ronald M. Zuker, MD, FAAP

Account Executive Sandy Huntman-Royer

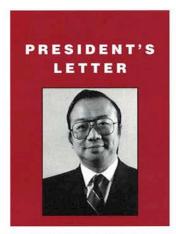
Managing Editor

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David T. W. Chiu, MD

To demonstrate that what we do is of undeniable benefit to enhance the quality of life of our patients and is socio-economically sound, we must document it with statistically meritorious data.

microsurgery has spearheaded an outpost in the field of reconstructive surgery far ahead of immunology. We can transplant a unit of composite tissue with identifiable vascular pedicle as small as 0.5 mm in diameter with an assuring rate of success. Technically we are ready to transplant organs as small as the ear of a rat if only we can formulate a immuno-suppression regimen effective in alleviating rejection of skin, yet relatively innocuous in side-effects. Once such formulation is found our current microsurgical capability will herald an explosive revolution in reconstructive surgery.

At this juncture, accepting the immunological handicap, yet maximizing

our microsurgical know-how, we continue to chart a new course toward the frontier. Auto-transplantation with high magnification allows us to reconstruct the deformed hand of children one to two years in age with amniotic band syndrome. Unceasing refinement of our technique continues to bring spectacular progress. However, at this tender age of development, this young tree is relentlessly attacked by the socioeconomic storm. The government, the third party payers and, particularly HMOs looking to economize have become insouciant to the time, effort, and skill that are required to perform microsurgical reconstruction and disproportionately slash the reimbursement to a point of negative return. It is the sequelae of the absurdity of imposing a segmental planned economy on the medical community within the framework of a free enterprise society. The reimbursement policy enforced by the HMOs is like the life jacket that was provided to the passengers of the Titanicallowing them to stay afloat for a little only to die of exposure.

To demonstrate to the public that what we do is of undeniable benefit to enhance the quality of life of our patients and is socio-economically sound, we must document it with statistically meritorious data. No one center or individual alone can produce such data fast enough to make a difference. However, if every member of our society bands together to form a common database, we can accomplish this efficiently. We must act decisively to bring this unfair situation to the light of the public. Therefore, public education is crucial. We must impress upon the public that, if a person had his whole hand amputated, the amputated part is salvageable, and the patient is stable, the best course of action is replantation and this procedure should be performed in a facility with microsurgical expertise. Also, there are situations such as resurfacing of a defect at the retromolar trigone following a squamous cell carcinoma resection where free flap resurfacing is not only plausible but also a significant improvement of the patient's quality of life as compared to a conventional pedicle-flap approach.

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President's Letter

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To demonstrate this objectively, we need data. I, therefore, asked Dr. Caroline Killigan and her committee to look into the feasibility of setting up a society-wide database and to develop strategies to conduct a society-wide outcome study. I urge you to give Dr. Killigan and her committee your full support of this critical undertaking.

I also asked Dr. Scott Levin to explore the feasibility and strategies for a public education campaign. Please send him your

ideas and suggestions.

The 1999 Annual Meeting will take place on January 16 to January 19, 1999 at the Hilton Waikoloa Hotel on the big island of Hawaii. This meeting is in conjunction with the AAHS Annual Meeting, January 12–16, and has a combined program on January 16. Thanks to the collegiality formulated by the last several generations of leaders in both organizations we have cemented close ties which will prove to enhance the strength and prosperity of both ASRM and AAHS. Dr. Randy Sherman and his Program Committee are

diligently preparing a superb scientific program. Our staff at the executive office is also hard at work organizing an exciting social program. Adherence to the half-day format will allow participants ample time to spend with their families. So, please mark your calendar, bring your family, and invite your friends, particularly those in the Pacific rim to Hawaii in January 1999 to attend this assuredly memorable meeting.

I would also like to express our gratitude to Gina Cappellania and Laura Downes in our administrative offices for many years who have moved on to other green pastures. We wish them the best in their future ventures. It is my privilege to welcome Sandy Huntman-Royer who is joining us as manager of ASRM. Together with Mary Jo Harrold as meeting manager, we will have an outstanding line-up of executive staff on our team. Let us have a wonderful year! RM

Incoming ASRM President David Chiu, MD (right) pauses to record the changing of the guard with outgoing President William Swartz, MD and his wife Cindy.

What's New in RM?

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study of new technique in radial forearm flap elevation. By elevating the flap over the fascia, there was less chance for tendon exposure and this improved the rate of donor site morbidity with a higher chance for primary wound healing of the donor site

In this combined session, there were three papers presented dealing with microsurgical treatment of brachial plexus injuries. Julia Terzis, MD and her group from Norfolk had two presentations. The

A somewhat controversial paper... described the use of extremity free flaps in twenty patients who were admitted to the hospital for less than twenty-three hours.

first paper was a clinical review showing the importance of tendon transfers in adult and obstetrical brachioplexus injuries. Dr. Terzis concluded that free muscle transfer was indicated in the younger patient while local tendon and motor transfers should be utilized in the adult patient. A second paper from her unit and a paper from Dr. Jose Monsivais, MD, El Paso, showed that the use of aggressive microvascular reconstruction of brachial plexus injuries utilizing extraplexus and intraplexus neurotization techniques was important in achieving high quality outcomes.

Head and Neck

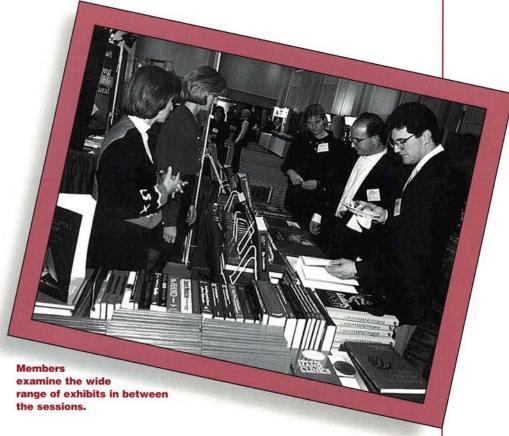
The theme of the Sunday scientific paper session was head and neck surgery. Two important issues were discussed. The first was the use of innervated flaps for intraoral reconstruction. Drs. Eric Santamaria and Fu-Chen Wei presented interesting

studies on immediate radial forearm flap. Although this concept is not entirely new it is interesting again to hear what it is like to work at one of the busiest microsurgery centers in the world and their experience with this procedure. Although they presented interesting results showing good recovery of sensation, they did not show an improvement in functional results such as speech and swallowing. This leads me to continue to question the benefit of using sensate flaps for reconstruction of the oral cavity.

One new and interesting topic presented at the meeting concerned microvascular surgery for nasal reconstruction. Two papers were presented. The first was from Chicago, primarily authored by Elizabeth K. Beahm, MD and the other from Boston, primarily authored by Julian Pribaz, MD discussed the use of microsurgery for nasal reconstruction. Dr. Beahm's presentation was a description of her results in 12 patients using free tissue transfer for nasal reconstruction. The free radial forearm flap was used most frequently (11/12), and this was used most commonly for re-establishment of lining. Dr. Beahm reported that in her experience, the flap worked well but needed thinning and structural support in order to get the best results. Dr. Pribaz demonstrated his techniques for microvascular nasal reconstruction using prefabrication and lamination of the radial forearm flap and other microvascular flaps, again with excellent results. While Dr. Beahm used free tissue transfer mostly for lining, Dr. Pribaz's series included several cases where the prefabricated flaps were used for external coverage. Dr. Beahm's criticism of using free flaps for coverage was the poor color match of the flap skin as compared to the surrounding facial skin. By using prefabrication flaps to create new flaps that incorporated skin from above the clavicles, Dr. Pribaz was able to circumvent this problem. Both of these papers were important advances for reconstructive microsurgery.

Basic Science Research

Of the papers presented on basic science, there were several on the effect of ischemic



preconditioning to prevent tissue damage from ischemia reperfusion injury. First was a report from the group in Louisville, entitled "Ischemic Preconditioning vs. Intermittent Reperfusion to Improve Flow to a Vascular Isolated Skeletal Muscle Flap in Rats". This work was an expansion of a previous study that showed that ischemic preconditioning attenuated the vasospasm and capillary no-reflow that usually occur after four hours of global ischemic in skeletal muscle. In this study, the investigator compared preconditioning vs. intermittent reperfusion (which was defined as three cycles of five minutes of schema followed by five minutes of pre-reperfusion) vs. ischemic preconditioning (which was defined as one cycle of forty-five minutes of ischemia followed by fifteen minutes of reperfusion). Their studies suggested that intermittent reperfusion was of no benefit, and perhaps was detrimental to the salutary effect of ischemic preconditioning. Another paper from the group in Louisville studied the use of Monophosphoryl Lipid A as a pharmacological agent to induce preconditioning effect against necrosis in skeletal muscle. This study utilized the

latissimus dorsi muscle of Sprague-Dawley rats. The studied showed that a single dose of Monophosphoryl Lipid A four hours prior to sustained ischemia protected the skeletal muscle against necrosis. A final paper from the group at the Cleveland Clinic studied the effects of ischemic preconditioning on the microcirculatory hemodynamics of muscle flaps. Using the rat cremaster muscle preparation, leukocyte rolling, adhering, and transmigration were evaluated, as well as functional capsular perfusion, endothelial edema index, and red blood cell velocities. In this study inflammatory response was diminished as demonstrated by the rolling, adhering, and transmigrating of leukocytes that was significantly improved in the preconditioned group.

Tissue Engineering

One of the main topics of discussion during the meeting also provided the topic for one of the panels chaired by Dr. Michael Miller: Tissue Engineering. Tissue engineering represents perhaps the future technolo-

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What's New in RM?

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gy for reconstructive microsurgery. Tissue engineering is the discipline by which tissues are constructed, altered, and hopefully improved using biological engineering principles. One can readily imagine a futuristic scenario where a reconstruction can be performed after an in-vitro fabrication of a new mandible, tibia, nasal cartilage or eyelid. Dr. Miller's panel gave an update on some of the work being done in bone and nerve regeneration and fabrication at the University of Texas/MD Anderson Cancer Center. I have already reported on Dr.

One can readily imagine a futuristic scenario where a reconstruction can be performed after an in-vitro fabrication of a new mandible, tibia, nasal cartilage or eyelid.

Pribaz's work with prefabrication for nasal reconstruction. Dr. Pribaz also chaired a panel which provided the attendees an update on the status of prefabrication. Flap prefabrication and tissue engineering are closely related, and the interest in these two panels seems to indicate the direction which microsurgery may be taking in the future.

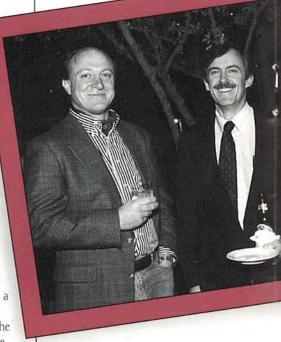
Along these same lines, a presentation from the Baylor College of Medicine Division of Plastic Surgery described the use of an adenovirus encoded with the human tissue plasminogen activator gene, to infect endothelial cells, thus preventing thrombosis in an animal model. This study gave a good demonstration of how tissue engineering may be used in the future to benefit reconstructive surgeons in general and microsurgeons in particular. This new

technology to create tissues, limit donor site morbidity and prevent tissue loss after ischemia is an exciting part of the future of reconstructive microsurgery.

Outcomes

Outcomes assessment of the benefit of microsurgical procedures continues to be at the forefront of our scientific meetings. William Lineaweaver, MD and the group from Stanford reported their study of economics of microsurgical cases comparing them to routine cases in a medical center. The microsurgery cases generated dramatically higher incomes and profits compared to routine cases, justifying the development of a microvascular unit in a medical center setting. The group from MD Anderson did a study comparing the resource costs of delayed and immediate breast reconstruction, showing that the cost of immediate reconstruction was significantly less than the cost for delayed reconstruction. Joseph Serletti, MD and the group from Rochester, NY did an outcome study of free tissue transfer in the older age population. The main indicator of morbidity was not age itself but rather the extent of co-morbidity present in the patient at the time of the procedure. Outcomes studies continue to be an important part of the scholarly assessment of microsurgery, and help to demonstrate its benefit and value in the health care marketplace.

As one can see, the meeting provided the attendees with a great deal of new and interesting information. The horizon for our specialty looks promising and exciting. Again, time and space could not permit me to report on all the studies presented and I encourage the reader to obtain a copy of the program booklet, which contains all the abstracts, and review these at their leisure. I look forward to updates on all this encouraging work next year in Hawaii. RM



ASRM members enjoy the relaxed atmosphere of the Reception and Dinner.



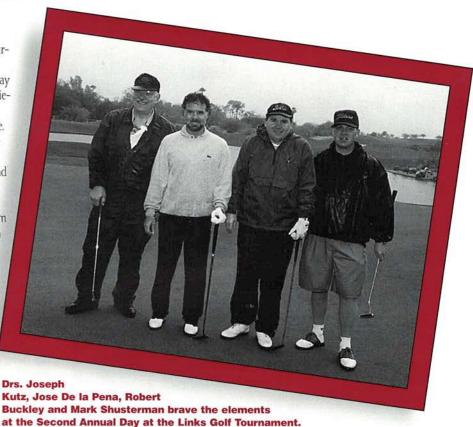
The ASRM reception was something to smile about for President-Elect Daniel Nagle, MD.



Wet Weather Dampens Tournaments But Not Social Activities

he ASRM members and guests attempted to enjoy the ASRM/AAHS golf and tennis tournaments at the 13th Annual Meeting in Scottsdale, Arizona, but an unplanned day of rain dampened the activities. A few diehard golfers played through, but most enjoyed networking inside the clubhouse.

The Saturday evening festivities were brought inside for a casual reception of country western music, hors d'oevres and good conversations. The final evening reception and dinner was a delightful array of southwestern cuisine. Dr. William Swartz passed the Presidential Medallion over to the incoming President, David T. W. Chiu, MD. Dr. Chiu proudly presented a gift of appreciation to Dr. Swartz. Dr. Chiu also recognized Dr. Paul Schnur of Scottsdale, Arizona, who assumed the office of President-Elect. Laura Downes, Mary Jo Harrold and Cathy Hay of AMS were recognized for their successful efforts in organizing the Annual Meeting. RM



The ASRM Council would like to recognize the following companies for their support and for exhibiting at this year's Annual Meeting. In appreciation, the members are urged to look at these companies when looking for the latest in supplies and equipment and services.

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HISTORY OF MICROSURGERY

In the Beginning...

By Ronald Zuker, MD

n our busy world of microsurgery we sometimes lose touch with our roots and how medicine began. As we reflect on our lives we should also reflect on our history and the foundation of medical practice.

The words of Hypocrites should be a daily reminder of our duties and obligations.

"I swear by Apollo the physician, by Æsculapius, Hygeia, and Panacea, and I take to witness all the gods, all the goddesses, to keep according to my ability and my judgment the

following Oath:

"To consider dear to me as my parents him who taught me this art; to live in common with him and if necessary to share my goods with him; to look upon his children as my own brothers, to teach them this art if they so desire without fee or written promise' to impart to my sons and the sons of the master who taught me and the disciples who have enrolled themselves and have agreed to the rules of the profession, but to these alone, the precepts and the instruction. I will prescribe regimen for the good of my patients according to my ability and my judgment and never do harm to anyone. To please no one will I prescribe a deadly drug, nor give advice which may cause his death. Nor will I give a woman a pessary to procure abortion. But I will preserve the purity of my life and my art. I will not cut for stone, even for patients in whom the disease is manifest; I will leave this operation to be performed by practitioners (specialists in this art). In every house where I come I will enter only for the good of my patients, keeping myself far from all intentional ill-doping and all seduction, and especially from the pleasures of love with women or with men, be they free or slaves. All that may come to my knowledge in the exercise of my profession or in daily commerce with men, which ought not to be spread abroad, I will keep secret and will never reveal. If I keep this oath faithfully, may I enjoy my life and practice my art, respected by all men and in all times; but if I swerve from it or violate it, may the reverse be my lot."

The prayer of Maimonides for the physician should continue to inspire us.

"Exalted G-d - Before I begin the holy work of healing the creations of your hands, I place my entreaty before the throne of your glory that you grant strength of spirit and fortitude to faithfully execute my work. Let not desire for wealth or benefit blind me from seeing truth. Deem me worthy of seeing in the sufferer who seeks my advice - a person - neither rich nor poor. Friend

or foe, good man or bad, of a man in distress, show me only the man.

If doctors wiser than me seek to help me understand, grant me the desire to learn from them, for the knowledge of healing is boundless. But when fools deride me, give me fortitude! Let my love for my profession strengthen my resolve to withstand the derision even of men of high station. Illuminate the way for me, for any lapse in my knowledge can bring illness and death upon your creations. I beseech you, merciful and gracious G-d, strengthen me in body and soul, and instill within me a perfect spirit."

The spiritual and medicinal path to Aboriginal healing should keep our minds open to the powers that surround us.

"The lines connecting the sun and moon represent the temptations each of us faces in life. When we're side-tracked, we can get back on the path with the help of natural medicines and plants. We gain wisdom from the birds, strength from the bear and vision from the eagle. All this protects us on the path called life."

Certainly food for thought, is it not? RM



Microsurgery

June 18-21, 1998 **PSEF Advanced Reconstructive Surgery** Symposium

Durham, North Carolina Contact: PSEF (800) 766-4955

September 9-12, 1998 53rd Annual Meeting of the **American Society for** Surgery of the Hand

> Minneapolis, Minnesota Contact: ASSH (303) 771-9236

January 1999 15th ASRM Annual Meeting

> Hilton Waikoloa Village Kamuela, Hawaii, HI Contact: ASRM (847) 228-9717

CODING CORNER

By Mark J. Buehler, MD

Ithough the 1998 CPT book has extensive codes for all the different levels of both upper and lower extremity amputations, it does not have codes for the failed replant. This is not the amputation that is replanted only to fail the next day or days later. This procedure should be coded with the appropriate replantation code for that extremity (i.e. 20822 Replantation, digit). The situation which is not uncommonly encountered is the amputation which is not replanted only after a large amount of time and effort is used to determine that the amputated part is indeed unsalvageable. There is not a specific code for this service in the 1998 CPT book.

Multiple procedures might be performed in the attempt to replant an amputated part only to end up with a simple amputation. For example, if a thumb replant is attempted and is unsuccessful secondary to the inability to achieve arterial inflow many prior steps would have been completed before the inability to restore arterial blood supply was determined. The usual steps which would be done prior the arterial anastomosis would include:

Debridement associated with

	fracture; skin\subq
26735	Open treatment of phalangeal shaft fracture, proximal finger or thumb, with or without internal or external fixation
26356	Flexor tendon repair or advancement, single, in "no man's land"; primary, each tendon
26418	Extensor tendon repair, dorsum of finger, single, primary or secondary; without free graft, each tendon
64831	Suture of digital nerve, hand or

foot; one nerve

each additional digital nerve

11010

64832

Failed Replantation of Amputated Parts

64830	Microdissection and/or
	microrepair of nerve (list
	separately in addition to code
	for the nerve repair)
35207	Repair blood vessel, direct;

hand, finger

-20

Microsurgery modifier to be use where appropriate

To invest this much time and effort in an attempted replantation and code for a simple thumb amputation is not appropriate for the amount of time and service given to the patient. The question is, how to code and determine the work units for this aborted replantation? There is, of course, no right answer to this question. The CPT Editorial Board has not yet created a code for the failed replant. This is probably appropriate since there is too much variability in the service rendered in the attempted replantation to have one code that can cover all the possibilities. That being the case, one must use reason and the current codes to come up with acceptable codes and work units. After talking with many different members of the Society three predominant methods for coding this procedure are currently being used. This is not to imply that there are not other reasonable methods, but these methods of coding have been used successfully in the past and might be useful to you in the future.

METHOD #1: CODE FOR WHAT YOU DO

This is the most accurate way to code for the services you render the patient. In the example of the aborted thumb replantation, one would code for all the procedures done plus the amputation. The work units could be calculated in a method similar to any service consisting of multiple procedures. This method of coding could be accused as "unbundling", but considering there is not an individual code for the aborted replantation this accusation is hardly appropriate. It might be most accurate to code the amputation as the primary procedure and the other procedures as secondary procedures given the fact the

post-operative follow-up care is most consistent with that of an amputation and not with multiple procedures performed.

METHOD #2: UP CODE THE AMPUTATION

When the service provided is greater than that usually required for the listed procedure, modifier -22 may be added to the usual procedure number. In the aborted thumb replantation the code for a thumb amputation, 26951, could be up coded to 26951-22 for the increased services performed. Although this method of coding the aborted replant is reasonable it does have very significant problems. First, to assign a objective work unit to this up coded procedure is difficult. One could use time as a measure of work. If a thumb replant normally takes 6 hours, and the aborted thumb replant takes 3 hours, then assign half of the work units for a replant for the amputation. The obvious problem with this method will be the payor's intrinsic reluctance to recognize the increase work and pay appropriately.

METHOD #3: DOWN CODE THE REPLANTATION

Under certain circumstances, a service or procedure is partially reduced or eliminated at the physician's election. Under these circumstances, the service provided can be identified by its usual procedure number and the addition of the modifier -52. This signifies that the service provided is reduced. This has a significant advantage over the up coding of the amputation; payors prefer to see down coding instead of up coding and may be more likely to pay for these services. This method still has the problem with the relative subjectivity in determining the work units. Again, time may the best method to determine the work units.

Again, these three possible methods for coding and assigning work units for the aborted replantation are by no means the only possible methods. When an appropriate code does not exist, use what a reasonable person would use. **RM**

Basic and Expert Techniques Showcased in Two Videos

By Keith E. Brandt, MD



Microvascular Anastamosis and the Technique of Digit and Hand Replantation

Author: Ralph T. Manktelow, MD

Intended Audience: Surgery residents requiring basic training in microvascular surgical techniques and surgeons desiring refinement of techniques for replantation surgery.

Length: 20 minutes **Rating:** 4 fingers

Summary: Dr. Manktelow is to be congratulated for this excellent video on the basic techniques of Microvascular Surgery. The video presents the technique of arterial and venous microvascular anastomoses performed on the rat femoral vessels. The microscopic portions of the video show excellent detail of the specimen and the techniques utilized. The narration during the first portion of this two-part video is very professional. The tape provides many tips for performing microvascular surgery including, vessel dilation and irrigation, appropriate use of magnification, suture placement and how to perform the (strip) test. There is even a description of how to use saran wrap to tamponade the anastomoses during release of the vessel clamps. My only concern regarding the first portion of this video is that the anastomoses were performed without using a double opposing clamp and significant tension on the anastomoses is demonstrated during the repair.

The second half of the video presents a clinical example of a thumb and a mid palm hand replantation. Because these are clinical cases the video detail is not as clear as the laboratory presentation. Diagrams are used to help clarify techniques. The video provides several excellent suggestions on how to select and identify appropriate vessels, how to expose necessary structures and how to

maintain axial alignment. The need for bone shortening is discussed.

The microscopic portions of the second half of the video are somewhat wanting. Details are obscured by glare from the lights and blood staining within the field. Visibility could have been improved with the utilization of contrast background. More discussion is needed regarding the sequence of repair of the different structures.



Immediate Free Radial Forearm Flap Reconstruction of the Esophagus Following Laryngopharyncoesphagectomy

Author: Zeno N. Chicarilli, MD, Gary Price, MD

Intended Audience: Experienced microvascular surgeons interested in the technique of esophageal reconstruction.

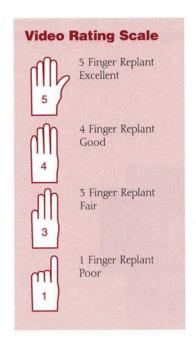
Length: 20 minutes **Rating:** 4 fingers

Summary: This video presents the use of the radial forearm free flap for esophageal reconstruction after laryngopharyncoesphagectomy. At the beginning of the video there is a brief mention of alternative techniques; however, there is no discussion regarding the pros and cons of the different techniques. The preoperative planning of this procedure is well presented, including a discussion of the anatomical landmarks. One clinical case is presented from the preoperative planning through tumor extirpation and eventual reconstruction. A very nice discussion is held at the end of the tape regarding the patient's postoperative course. The tape provides a video of the patient swallowing liquids, a close up of the patient's donor site and excerpts from a barium esophageal study. Unfortunately only this single case is presented and no results of any series or comparison with other procedures are presented.

The video itself suffers from the usual glare and loss of detail when attempting

to video live clinical cases. The dissection of the flap from the radial forearm is better as it was performed under tourniquet exsanguination. The discussion provides details regarding the use of cutaneous veins and/or the vena comitantes. The need to preserve the peritenon and branches of the dorsal radial sensory nerve is emphasized. Although the patient presented in this video had no particular complications related to the donor site, I feel a more realistic representation would have included some discussion of the disadvantages of the radial forearm donor site.

The technique of insetting the radial forearm flap in the neck is presented nicely. Thankfully, very little video time is wasted presenting unnecessary dissection or suturing. Overall this is a very good video with limited applications. **RM**



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RECONSTRUCTIVE MICROSURGERY

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