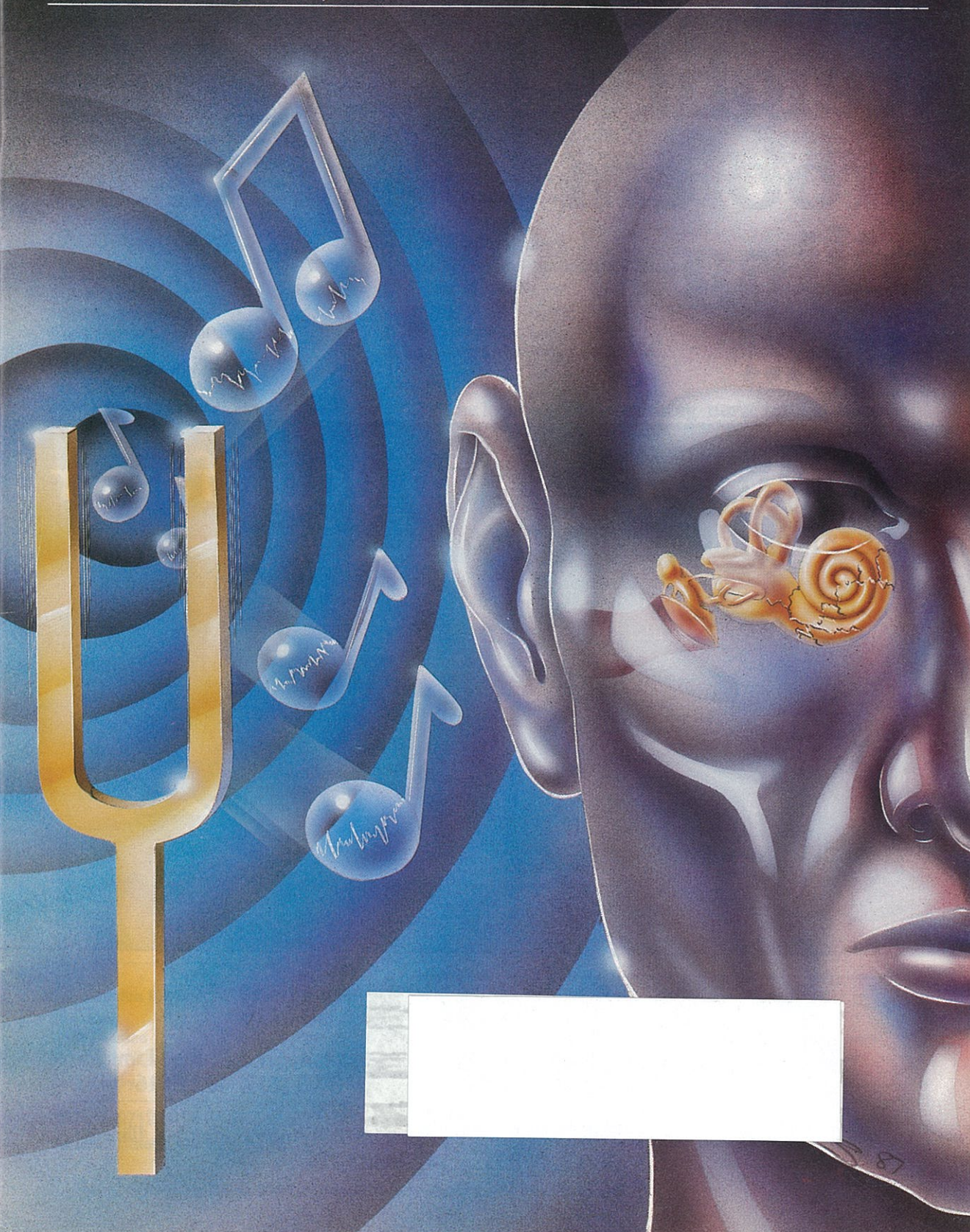


CANADIAN

Operating Room Nursing Journal

Volume 5, Number 5, October, 1987



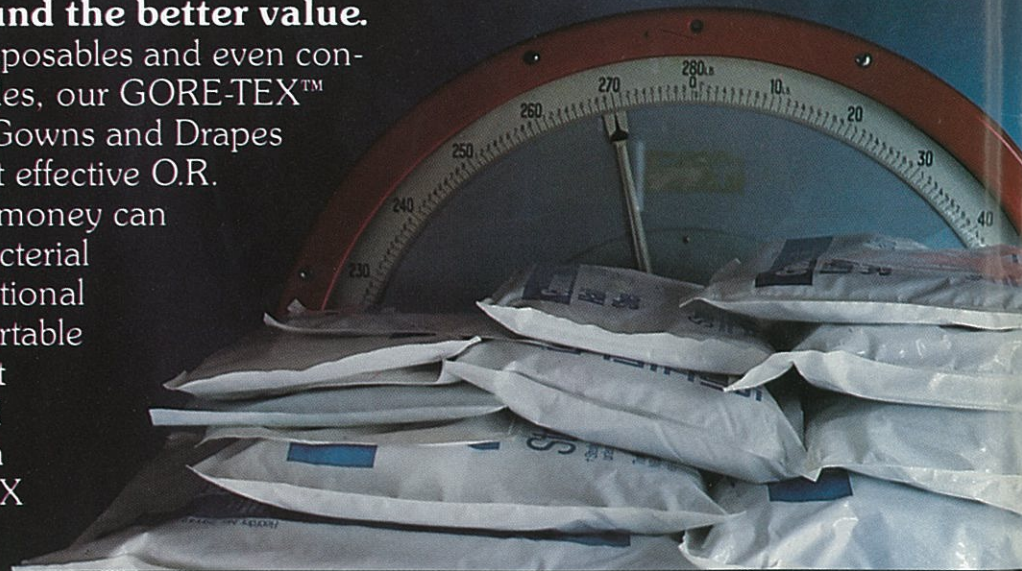
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CANADIAN

Operating Room Nursing Journal

Volume 5, Number 5, October, 1987

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Canadian Operating Room Nursing Journal

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GENERAL INFORMATION

The Canadian Operating Room Nursing Journal is published six times a year (February, April, June, September, October and December) for operating room nurses and related surgical nursing personnel across Canada.

The objective of this publication is the continuing education and professional advancement of the operating room nurse as well as personnel in related nursing services.

Under the guidance and direction of an editorial advisory board, the intent of this publication is to assist national, governmental and allied health care agencies in the process of news and information flow.

The Journal will also assist national, governmental and allied health care agencies in the process of news and information flow to this specialized segment of the health care field.

The Canadian Operating Room Nursing Journal is dedicated to the publishing of original and practical information based on scientific principle and clinical fact. This journal is periodically reviewed by the Editorial Advisory Board, with manuscripts and submissions, whenever possible, adjudicated and assessed in advance by peers specifically chosen by this Board.



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The Canadian Operating Room Nursing Journal encourages and invites manuscripts and/or submissions of relevance and current interest to operating room nurses and related health care personnel in the area of surgical nursing care.

As a bi-monthly professional publication, the Canadian Operating Room Nursing Journal reaches the following nursing categories subsumed under the heading, operating room nurse. These categories include:

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|---------------------------|------------------------|
| - O.R. nurses | - Nurse educators |
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Submitting procedure

Having submitted a manuscript for publication, the author(s) should retain at least one copy. A covering letter should accompany the manuscript and should include the home and work addresses and phone numbers of the author(s). Every submission should be double-spaced with wide-margins on (standard) 8½ by 11 inch paper. However, other formats will not be rejected if the submission is legible and neat.

Length

Although there is no restriction on the length of a submission, a paper between 5 and 15 pages (excluding illustrations) is advisable.

Illustrations

Photographs, charts, diagrams, graphs, cartoons and other illustrations greatly enhance a professional manuscript. Photographs should be un-mounted, sharp and preferably, black-and-white. All illustrations should be labelled clearly on the back.

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The Canadian Operating Room Nursing Journal follows the format recommended and used by the Canadian Medical Association (CMA).

Your autobiography

This information should include: full name; academic accomplishments (no more than three after the name); last university, college or school attended; present position in the profession; and membership or associations of a professional nature.

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Cochlear implants

By Susan Bennington, R.N.

The cochlear implant is an exciting new development that will ultimately help many profoundly deaf people. For a bilaterally deaf person with an intact auditory nerve who is unable to benefit from a conventional hearing aid, this information is very exciting.

What is a cochlear implant?

The cochlear implant is a device inserted percutaneously or transcutaneously that electronically stimulates the cochlear nerve fibers so that a sensation of sound is produced. Twenty years of research have gone into the development of this implant with the vast majority of the research being done in the last three years. Research has determined that many cases of total deafness are found at the hair cell level in the cochlea, with the patient having some degree of auditory nerve function. Only a few fibers of the cochlea nerve are necessary for stimulation to give a sensation of sound. This implant, therefore, is an electronic device that transforms sounds into electrical signals to stimulate cochlea nerve fibers in the absence of the functioning hair cells.

Anatomy and physiology

To properly understand how the cochlear implant works, a review of the anatomy of the ear along with the physiology of hearing is helpful. The ear is divided into three divisions, the external, the middle and the inner ear.

The external ear consists of the auricle or pinna. Its function is to collect the sound waves and channel them down the auditory canal to the eardrum or tympanic membrane. The tympanic membrane stretches across the deepest part of the ear canal and

separates the external auditory canal from the tympanic cavity or middle ear. This membrane vibrates when the sound wave reaches it.

The middle ear is an air-filled cavity with three small ossicles that form a chain separating the middle ear from the inner ear. These ossicles (the malleus, incus and stapes) amplify the vibration of the tympanic membrane and pass it on to the cochlea. The base of the stapes fits into the oval window, a small opening between the middle and inner ear. Below the oval window is the round window, which also separates the middle and inner ears. The round window is covered with a mucus membrane called the secondary tympanic membrane.

The cochlea

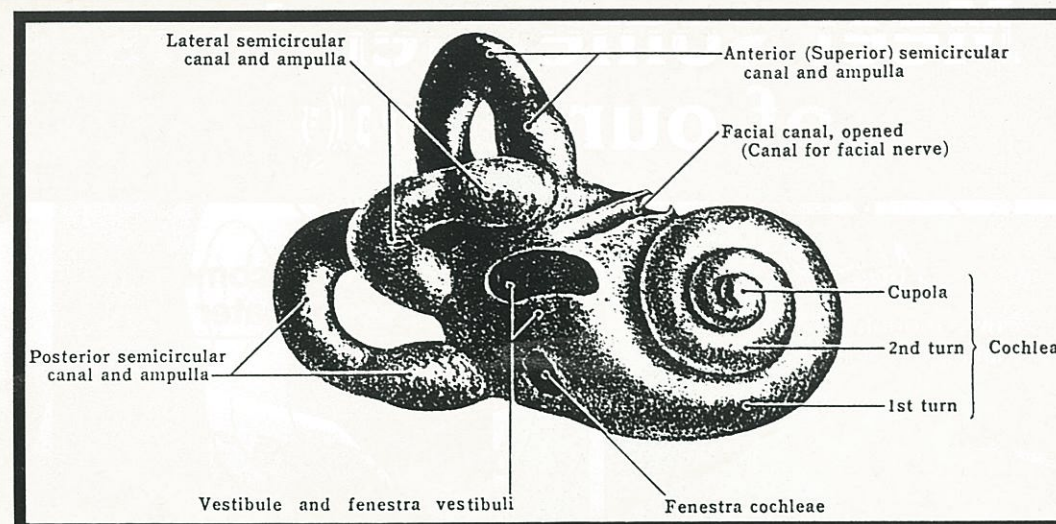
The inner ear consists of a bony labyrinth and a membranous labyrinth. The bony labyrinth can further be divided into the vestibule, cochlea and semi circular canals. The semi circular canals are essential to the sense of balance.

The cochlea is a spiral tube that contains the nerves that transmit sound to the brain. The inner ear lies within a portion of the temporal lobe and contains two separate fluids. One of the fluids, the perilymph, acts as a cushion to the receptors of



About the author

Susan Bennington, R.N., took her diploma nursing course at Okanagan College in Kelowna, B.C. She has worked at the Toronto General Hospital and St. Paul's Hospital in Vancouver, where she studied the Operating Room Technique and Management Course.



Lateral view of bony labyrinth and cochlea

hearing and is continuous with the sub arachnoid space and cerebral spinal fluid through the cochlear duct. Inside the cochlea is the organ of Corti which is the organ of hearing. It extends along the length of the cochlea and has sensitive hair cells or cilia that are set in motion by the vibrations of the ossicles. The motion of these hair cells become electrochemical impulses that are passed along the 8th cranial nerve (vestibulocochlear nerve) to the brain where they are interpreted as sound.

How the implant works

Many devices have been developed to stimulate the auditory nerve. These can be separated into single and multi channel implants. An implant can either be percutaneous, meaning it projects through the skin or transcutaneous, where it is implanted directly under the skin.

Approximately half dozen companies around the world manufacture cochlear implants. Each design has different advantages and disadvantages. At this time it is difficult to properly compare the advantages and disadvantages of each device because no standard of testing has yet been established. Long term follow-up is not available yet and there have been very few comprehensive reports from independent research centers. The doctor implanting the device will choose a particular model based on his or her testing of the patient and the model he/she feels will best suit the patient's needs.

The cochlear nerve fibers are stimulated by elect-

rical signals received by the implant from a speech processor. All implants have a speech computer processor worn outside the body that picks up sound. The microphone then changes the acoustic information into an electrical signal or energy. The processor amplifies this electrical energy, filters it and passes it to the transmitter. In the percutaneous model the transmitter is connected by a direct wire to the receiver implanted behind the ear.

With the transcutaneous model the transmitter changes the electrical energy into magnetic currents which are passed through the skin's surface, without being felt, to the receiver implanted behind the ear.

The internal receiver is surgically placed in the mastoid bone with the intra cochlear electrode being passed through the round window into the cochlea. The single channel models also have a ground wire which is placed under the temporalis muscle in the mastoid or middle ear. When the electrical energy is passed along the electrode placed in the cochlea it stimulates the hearing nerve (8th cranial nerve). The nerve becomes excited and sends a signal to the brain which interprets this as a sound for the individual. The multi channel implant does not have a ground wire. The several individual points along the multi channel electrode stimulate the auditory nerve differently, enabling the person to interpret different frequencies of sound at different volumes.

Implant eligibility

The cochlear implant is not a cure for deafness. It

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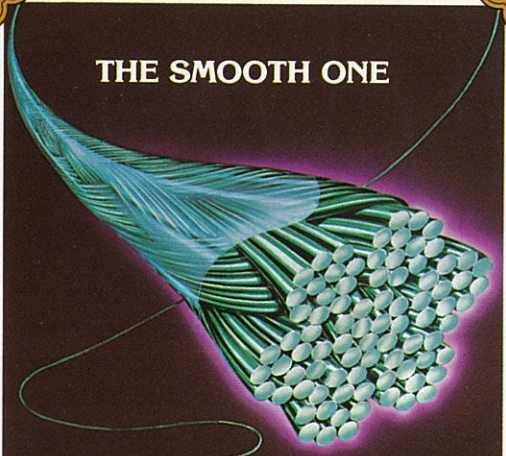
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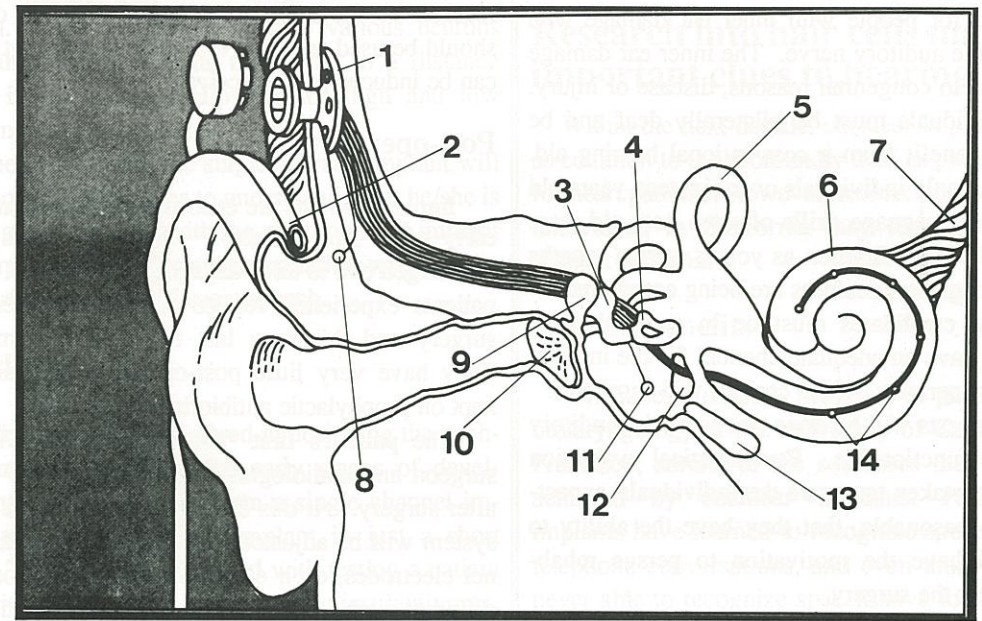


Illustration of a percutaneous cochlear implant

- | | |
|--|--|
| (1) Percutaneous pedestal | (9) Malleus |
| (2) Microphone | (10) Tympanic membrane |
| (3) Incus | (11) Indifferent electrode |
| (4) Stapes | (12) Window through promontory bone visually accessing first turn of cochlea |
| (5) Semicircular canal | (13) Eustachian tube |
| (6) Cochlea | (14) Contact electrodes |
| (7) Auditory nerve | |
| (8) Indifferent or non-contact electrode | |

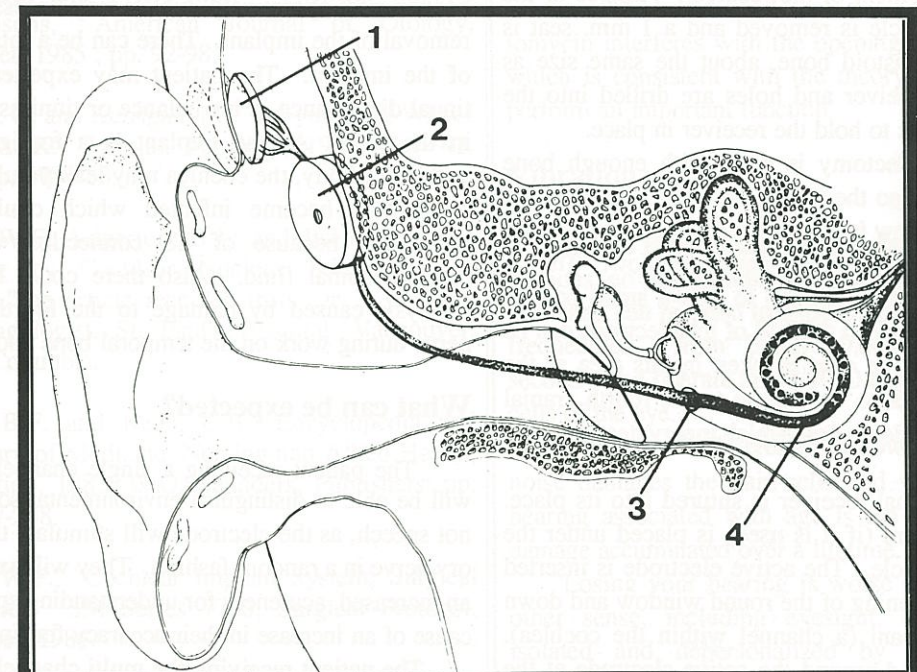


Illustration of a transcutaneous cochlear implant

- (1) Internal antenna (2) Receiver (3) Window through promontory bone (4) Electrode

is designed for people with inner ear damage who have a viable auditory nerve. The inner ear damage may be due to congenital reasons, disease or injury. These individuals must be bilaterally deaf and be unable to benefit from a conventional hearing aid. At one time only individuals over eighteen years old and with the language skills of a ten year old were considered. Now children as young as five months old with congenital deafness are being considered.

Implant candidates must be in good physical health and have an adequate channel for the implant device. Tomography of the cochlea will show this.

Further tests will be done to ensure the auditory nerves are functionable. Psychological evaluation will be undertaken to ensure the individuals' expectations are reasonable, that they have the ability to adjust and have the motivation to pursue rehabilitation after the surgery.

Surgical intervention and procedure

Positioning, prepping and draping of the patient is to be done according to the hospital procedure for a mastoidectomy.

Placement of the receiver, either internal or external, is behind the pinna without touching the pinna but allowing for glasses to be worn. A post auricular incision is made about 1 cm. outside the expected placement of the receiver. A piece of the temporalis muscle is removed and a 1 mm. seat is cut into the mastoid bone, about the same size as the internal receiver and holes are drilled into the bone for sutures to hold the receiver in place.

A mastoidectomy is done with enough bone being removed so the top of the incus is visible and the round window is exposed. The incus is removed for better visibility of the round window. Then a small diamond burr is used to drill a small hole in the round window so the ball of the electrode can be inserted. Extreme care is taken in this area as the work is being done very close to the fourth cranial nerve (the trochlear nerve which innervates the nerve to the eyeball).

The internal receiver is sutured into its place. The ground wire (if it is used) is placed under the temporalis muscle. The active electrode is inserted through the opening of the round window and down the scala tympani (a channel within the cochlea). Fascia is packed around the active electrode at the round window and the wound is closed in layers.

If cautery is used after the placement of the

receiver or for future surgery only bipolar cautery should be used as it will minimize the current which can be induced in the receiver.

Post-operative care

Implant patients are encouraged to ambulate very early after their surgery. They are often being discharged two to three days post-operatively. Many patients experience vertigo (dizziness) after their surgery and this may last up to several months. They have very little post-operative pain and are kept on prophylactic antibiotics for ten days.

The patient's first "training session" with the surgeon and audiologist will be about 3 - 5 weeks after surgery. At this time the external parts of the system will be adjusted. On the newer multi channel electrodes, each electrode piece will produce a different pitch sensation. These are fine tuned individually for a particular pitch and loudness, according to the hearing response of the individual. This will allow the patient to hear a variety of pitches both low and high and can be readjusted over time if any changes occur in the patient's hearing.

Complications

Prior to having the surgery the patient should be aware of the complications that can happen post-operatively, which may necessitate the removal of the implant. There can be a total failure of the implant. The patient may experience continual disturbance in his balance or tinnitus (ringing in the ear). As the implant is a foreign object within the body, the cochlea may leak purulent fluid or it may become infected which could cause meningitis because of its connection with the cerebral spinal fluid. Also there could be facial paralysis caused by damage to the fourth cranial nerve during work on the temporal bone and muscle.

What can be expected?

The patient receiving a single channel implant will be able to distinguish environmental sounds but not speech, as the electrode will stimulate the auditory nerve in a random fashion. They will experience an increased acuteness for understanding speech because of an increase in their accuracy for lip reading.

The patient receiving the multi channel implant will be able to differentiate between frequency and volume and this will allow him to understand some

speech. This is possible because various neurons are stimulated at various times due to a distance delay in the electron allowing for high and low frequency to be transmitted.

The patient with the single channel implant will still require visual clues to understand what he/she is hearing. The patient with the multi channel implant appears to receive enough information without visual clues to understand some speech.

Conclusion

The technology involved in designing the cochlear implant is still in the early stages of development. We have gone from a single channel implant to a multi channel implant in just a short time. The principles involved with testing a patient and with the operative procedure are just beginning. Our ability improves with every new development and there are greater improvements yet to come. For the person who is living in a world of silence, and cannot be helped with a standard hearing aid, just the thought of possibly being helped and maybe "hearing" again must be nothing short of a miracle. ■

Bibliography

Gantz, B.J. and Tyler, R.S., "Cochlear Implant Comparisons," *American Journal of Otology*, November, 1985 ; pp. 92-98.

Iadarola, G. and Kerrigan, M., "Do you Hear What I Hear," *AORN Journal*, February, 1986, Vol. 43, No. 2, pp. 478-483.

House, W.F.; Edgerton, B.J.; and Itselberger, W., "Hearing by Cochlear Nucleus Stimulation in Humans," an article received from Dr. J. Cleland, Otolaryngologist, St. Paul's Hospital, Vancouver, British Columbia.

Miller, B.F. and Kean, C.B., *Encyclopedia and Dictionary of Medicine, Nursing and Allied Health*, 3rd Edition, 1983; W.O. Saunders, Publishers; pp. 351, 247-248.

House, W.F., "Cochlear Implant System, Surgical Procedure," 3M Series 7700, Surgical Protocol, November, 1984.

Tartora, G. and Anagnostakos, N.P., "Principles of Anatomy and Physiology," 3rd Edition; Harper and Row Publishers, 1981; pp. 399-403.

Research into hair cells may hold important clues to hearing loss

Within the next decade, cochlear implants may be as common to the profoundly deaf as pacemakers are for heart patients. However, research presently being undertaken in California may leave the cochlear implant far behind.

Implant benefits

Dr. James Hudspeth, professor of physiology and otolaryngology at the University of California, San Francisco, admits to the successes that have been achieved by cochlear implants. Patients with implants have learned to recognize speech, conduct telephone conversations, and even those who were never able to recognize speech have found it useful in lip reading.

Through his study of the hair cells in the inner ear, he hopes to prevent hearing loss or cure it without the need for an implant.

Ten years ago, Dr. Hudspeth made a major technical leap by developing ways to study hair cells in a test tube. Since then, he has discovered small pores in the tips of the hairs that appear to open when the hairs slide past one another as they vibrate or rock to and fro.

In 1985 he showed that the antibiotic streptomycin interferes with the opening of these pores, which is consistent with the theory that the pores perform an important function.

Vibration range

The hairs respond to sounds so faint they produce motions no larger than the size of the hydrogen atom and can respond to a great range of vibrational frequencies - from 20 to 20,000 vibrations per second - and operate about 1000 times as fast as the cells of the eye.

Dr. Hudspeth is interested in how factors such as noise damages the hair cells and whether loss of hearing associated with age is the result of noise damage accumulated over a lifetime.

"Losing your hearing is worse than losing any other sense, including eyesight. People become isolated and depersonalized by deafness," Dr. Hudspeth said. "Now for the first time, there is the hope of being able to restore their hearing. The psychological benefits alone will be enormous."

Vaginoplasty

By Theresa Howard, R.N., H.B.A.

The congenital absence of a vagina was first described by Realdus Coumbus in 1572 (Word, 1951). According to Jackson (1965), absence of a vagina is due to a failure of Mullerian duct development. The Mullerian ducts are embryonic tubes from which the oviducts, uterus and vagina develop in the female; in the male, they atrophy. Embryonic failure is usually complete when fallopian tubes are poorly developed, the uterus is rudimentary or absent, and there is no vagina. With a partial anomaly, the Mullerian tubercle fails to grow down and unite with the "up" growing urogenital sinus (Jackson, 1965).

Diagnosis is usually made by primary amenorrhea (absence or suppression of menstruation) at age 15. Examination reveals the absence of a vagina, an imperforate hymen (a hymen without an opening) which causes haematocolpos (retained menstrual blood) or haematometra (monthly subjective symptoms of menses without blood flow).

Surgical correction of the absence of a vagina, or vaginoplasty, had its inception over 150 years ago (Cali and Pratt, 1968) when Dupuytren, in 1817, first reported an attempted surgical correction (Judin, 1927). Since that time, there have been many procedures performed, using many materials to surgically correct for the absence of a vagina.

Techniques of vaginoplasty

This submission will discuss some of the techniques used to form a vagina. It will focus on a description of a new technique performed previously in England and now in North America at the Ottawa Civic Hospital. Vaginoplasty includes techniques using intestinal tissue transplants, simple reconstruction, continuous pressure techniques, the use of free skin grafts, and the McIndoe-Read technique.

Intestinal transplants

In 1904, Baldwin used a length of lower ileum (5 inches). The midpoint of the ileum is pulled farthest down towards the pelvis and is isolated, with care taken to maintain blood supply and restore intestinal continuity. The ends of the loops are closed and the midpoint is pulled down to the perineum (the external region between the vulva and the anus) through a dissected space between the bladder and rectum. The lower, folded end of intestine is opened and sutured to perineal skin. The septum between the two halves of ileum is divided later. Complications which may arise include excessive, irritating mucoid discharge and dyspareunia (Jackson, 1965).

Another intestinal transplant procedure (Schmid, 1957 and Shirodkar, 1960) uses the sigmoid to form a vagina. This technique provides a good blood supply, adequate lubrication and little tendency to contracture. However, prolonged aftercare is required and surgery is extensive (Jackson, 1965).

Simple reconstruction

Williams (1964) described his simple vulvovaginoplasty using the inner sides of the labia majora to build up the perineum and form a "normal" size vagina. However, it was later stated by Dhall (1984)

About the author

Theresa Howard, R.N., H.B.A., recently completed her Honours Degree in Psychology and Women's Studies at the University of Ottawa. She is a full-time operating room nurse in gynecology at the Ottawa Civic Hospital.



that, although the procedure is simple, quicker and requires no skin graft, a follow-up of couples reveals dissatisfaction because of ill-placed vaginal axis.

Continuous pressure techniques

Simple and persistent use of pressure and dilation composes the non-surgical method of Frank (1938). Solid tubes, 5/16 of an inch wide, are pressed into the hymenal region in a backward direction for half an hour, three times a day. When a definite pit is formed, the normal vaginal line becomes the direction of pressure for the dilators. When the canal reaches a length of 2 1/2 inches, larger dilators are employed. However, even with persistence, there is a tendency to contracture.

Free skin graft reconstruction

An artificial vaginal cavity, lined with a free skin graft, was first attempted by Heppner in 1872. It failed (Jackson, 1965). Other attempts included Graves in 1921 who used pedicle grafts from the labia minora and inner thigh; Kirschner and Wagner in 1930 who used a sponge-rubber mold with a Thiersch graft; Kanter and Wells, both in 1935, dissected a space and intermittently packed it; Israel in 1935 used a full thickness graft; Friedl-Meyer in 1935 used a Thiersch graft on a spiked-metal mold; Monod and Iselin in 1936 used a dental wax mold; Auvrax in 1934 used a rubber sponge covered with a hernial sac; and Lafargue and Rivere in 1937 used amniotic membranes.

McIndoe-Read Technique

The McIndoe-Read vaginoplasty, according to experts, is easy to perform, no reported mortality, low morbidity and a satisfactory result (Jackson, 1965).

A skin graft of sufficient size to cover a mold is taken from the inner thigh, or from the upper gluteal region if a thicker graft is required.

The perineal area is injected with xylocaine and epinephrine. A metal sound is placed in the urethra and the skin fold, formed with retraction on either side of the vaginal dimple, is divided. The vesico-rectal space is then opened with sharp dissection. The cavity is opened manually to the pouch of Douglas (recto-uterine pouch) until it accommodates the mold without tension. After haemostasis is achieved, the mold, covered with the skin (raw sur-

face outward) is inserted. The levator muscles and perineum are united to hold mold in (Jackson 1965).

A foley is left in and the patient is prophylactically covered with antibiotics. The mold remains in place for up to ten days, after which time it is removed under anaesthesia. The cavity is then cleansed and a hard mold is inserted. The procedure calls for the maintenance of the mold's position in the vagina for up to five months, after which daily dilation is necessary until sexual activity is instituted (Jackson, 1965).

Complications

As with any procedure, there can be complications. These complications are outlined by Jackson (1965):

1. Extrusion of the mold. The mold must be replaced at once if it extrudes within the first three to four months. Prolonged dilation is the single most important factor for a successful outcome.
2. Urinary infection. This can be avoided with antibiotic coverage.
3. Recto-vaginal fistula. Excessive pressure from an overly large mold, haematoma, or infection may cause necrosis and fistula.
4. Urethro-vaginal fistula. This, too, results from pressure necrosis.
5. Haemorrhage.
6. Vaginal granulations. Small areas of graft which do not survive will granulate and must be removed with diathermia or curettage. Within a year, biopsy will confirm if the graft has developed the property of storing glycogen and closely resembles the vaginal mucosa (Jackson 1965). In 1968, Cali and Pratt reported the long-term results of various vaginoplasty techniques. Up to this time, there were many individual and group reports, but the longest follow-up was only ten years. Their reported research, spanning 46 years, is still, to date, one of the most comprehensive (1968). To briefly summarize their report, Cali and Pratt stated that, in America (Canada/United States) the McIndoe operation still remains the procedure of choice. An interesting statistic to be mentioned is

that 84 of 113 patients (74%) expressed satisfaction with function and made favourable comments on the results of the operation (Cali and Pratt, 1968).

Technical advances:

Molds:

The McIndoe-Read technique uses a Thiersch graft on a sponge mold; but other materials have been used as well. These include sponge-rubber covered with a condom (Counsellor and Flor, 1957) and a polythene bag filled with glass wool used by O'Connor in 1962 (Jackson, 1965). A summary of various types of molds is described in Table 1.

As discussed, these molds are covered with different materials including hernial sacs, split and full skin grafts and amnion.

A further step is the covering of a mold with a proven material with good results. Such a technique is using a sponge-rubber mold covered with amnion.

Amnion

Human amnion has been used since 1910 to promote tissue granulation in skin transplantation, for the treatment of burns and skin ulcers, vaginal reconstruction and the repair of conjunctival defects. Other applications include the use of amnio-plastin after craniotomy, for radical vulvectomy, and peritoneal replacement after pelvic exenteration.

Mammals lie in an amniotic sac that arises from extra-embryonic tissues. The chorion, forming the outer aspect of this sac, is in contact with the mater-

nal cells without being rejected. The inner aspect consists of a predominantly single-celled layer of amnion epithelium and its underlying basement membrane and is bathed by fluid without actually contacting maternal tissue (Faulk et al., 1980).

Human fetal membranes for allograft are harvested from delivery rooms. Maternal blood, meconium and other contaminants are removed by sterile saline irrigation. Thereafter, the membranes are stored in normal saline, with or without antibiotics, at 4° C. Sterilization and storage of the membranes have been accomplished by many means including:

- Preservation in 1:40 solution sodium hypochloride produced no bacterial cultures until 30 days (Dino in 1966);
- Normal saline with aqueous penicillin 50,000 units and streptomycin 1 gram in 400 ml. of saline with no growth in 30 days; and
- Normal saline with polymixin, ampicillin, gentamicin and amphotericin B at 4° C, remained sterile for two days (Trelford et al in 1973).

Before use, the amnion is separated from the antigenic chorion, and the uncontaminated mesenchymal surface is placed outwards on the mold. The membrane adheres firmly to the raw, newly created vaginal tunnel where it protects underlying granulation tissue and facilitates epithelization (Dhall, 1984).

Amnion in vaginoplasty

Morton (1986) reported the use of amnion in vaginoplasty in London, England from 1983 to 1985. The first reconstruction involved the use of amnion collected one to six days previously, and wrapped around a soft mold of sponge rubber covered by condoms. (See Diagram A Next Page)

A McIndoe-Read procedure was performed. The amnion, which was stripped from the chorion leaving only a small portion at one end as a marker to identify the proper surface, was thoroughly rinsed of its storage solution, applied to the mold and secured with suture. After

Table 1

Molds used in McIndoe-Read vaginoplasty

Author	Mold
Wells (1935)	Tightly packed vaseline gauze
Kanter (1935)	Idioform gauze followed by glass dilator
Warton (1938) and Owens (1942)	Balsa wood covered by a condom
McIndoe (1938)	Hollow vulcanite mold
Polycrates (1957)	Metal mold
Shears (1960)	Silver or stainless steel mold
Meigs (1960)	Pyrex glass mold
Stablers (1965)	Hollow "H" shaped dental mold
Salvador Castanand (1963)	1. Soft cylindrical polyethylene plastic bag covered with decron wool 2. Light plastic ethafoam 3. Foam rubber mold of desirable size

(From Khanna and Khanna, 1982)

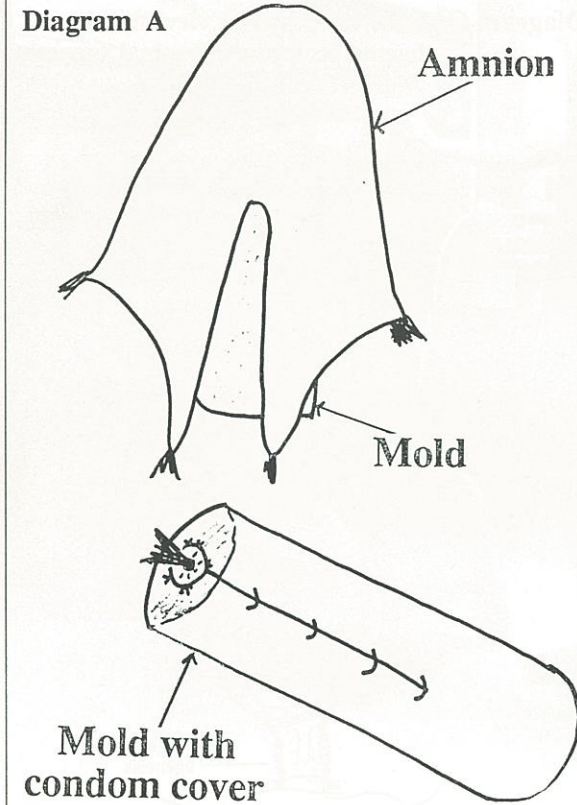
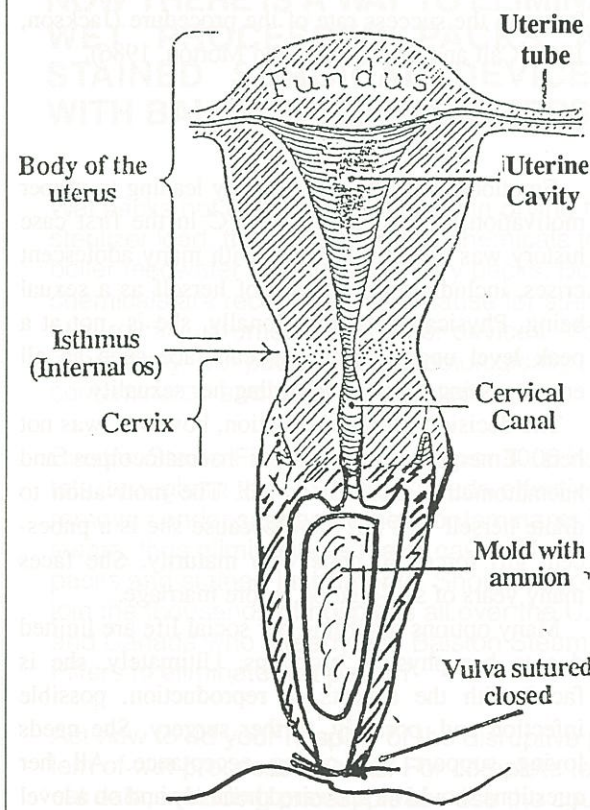


Diagram B Anterior-posterior view of vagina showing mold with amnion in place in vaginal sac



haemostasis was achieved in the new cavity, the mold was inserted and the perineum closed to prevent extrusion. (See diagram B)

In seven days, the mold was removed under general anaesthesia. Because a certain amount of fluid had accumulated behind the mold, the cavity was irrigated. A new mold (of the same material) was introduced and the cavity again closed. In a further seven days, the same procedure was again performed. After the final mold was removed, patients were instructed in the use of a plastic vaginal dilator to be used three times daily for 15 minutes. Intercourse was allowed after two weeks.

Morton (1986) reported encouraging results. In the majority of cases, at the first mold change, the amnion formed a distinct layer applied to the vaginal wall. With the second mold, epithelization was virtually complete. Four weeks after the operation, the vaginal epithelium was a healthy pink and granulation uncommon. There were some complications: some bleeding, a rectal injury, labial inflammation, but these were overcome with treatment. In eight to ten weeks, the resulting epithelium was histologically identical to normal vaginal epithelium.

The ultimate result of vaginoplasty depends entirely on the motivation of the patient to carry out the post-operative dilation. Vaginal contracture occurs both with amnion and skin grafts, if the canal is not properly maintained. However, Morton states that the degree of contracture is certainly not greater and possibly less severe than when a skin graft is used.

The technique of vaginoplasty as outlined by Morton was performed in England and utilized amnion wrapped around a mold of foam sponge inside rubber condoms. This technique had not been reported as performed in North America until March, 1985, when it was done at the Ottawa Civic Hospital by Dr. J.E.H. Spence and Dr. E. Hughes.

Present-day technology

For the McIndoe-Read operation, the OR is set up for an anterior/posterior repair. To this basic set-up is added an extra sterile draped prep table and set of basins where the amnion is cleaned and irrigated, the condoms rinsed and the sterile block of foam cut to the required size. The amnion, harvested within 24 hours of the booked procedure, is brought by the surgeon to the operating room in a sterile solution of saline with 50,000 units penicillin (stored at 4°C) where it is rinsed on the extra prep table. (Cont'd)

Diagram C1
Anterior-posterior view of normal vagina

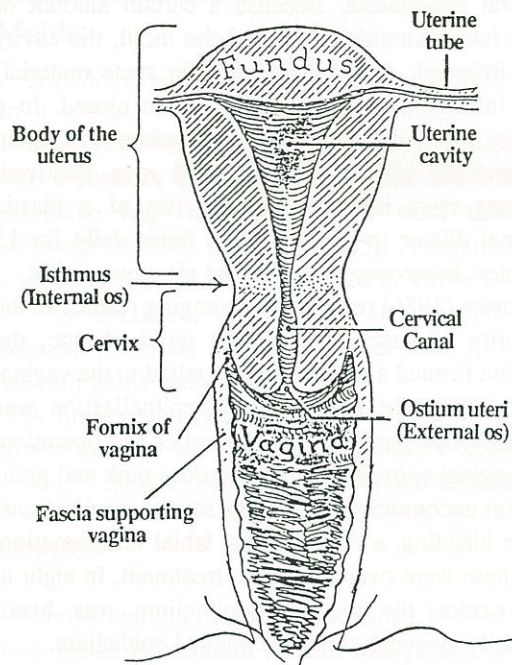
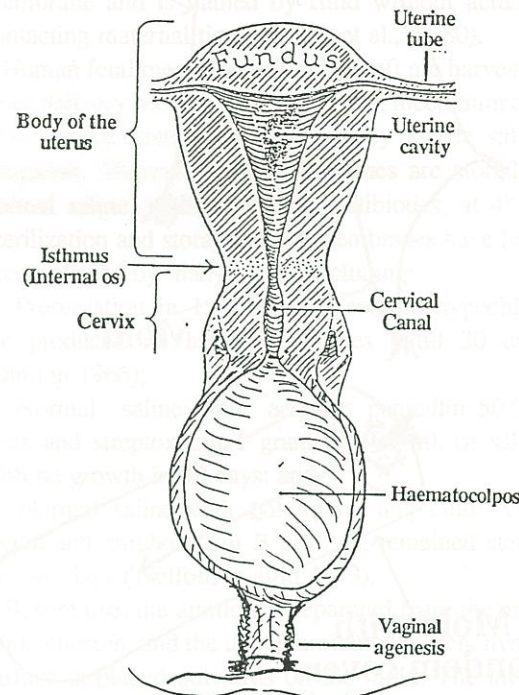


Diagram C2 Anterior-posterior view showing haematocolpos and vaginal agenesis



For the later mold changes, a sterile intravenous tubing is added to the set-up so that a saline flush of the cavity can be accomplished. For all the procedures, a large block of sponge, approximately 30 cm. X 20 cm. X 3 cm., is sterilized previously and ready for use. Ordinary condoms are easily obtained for use. Throughout all procedures, nursing flexibility is necessary as each procedure is unique and dictated to by immediate needs.

Case histories

On the following page are described two case histories of vaginoplasty. These two cases, reportedly the first vaginoplasties using the McIndoe-Read technique and mold in North America, provide two ends of the continuum. The first case (Miss C) is a very young girl with normal uterus and ovaries, but with vaginal agenesis - failure of the vagina to grow or develop. (See diagram C1 and C2). Surgery was necessary and performed in a crisis situation.

The second case is a young woman with no uterus, ovaries or vagina. Her surgery was elective. With each, however, separate and individualized care plans are called for. In both cases, dilation is a daily procedure of paramount importance. When not per-

formed, contractures develop quickly. Experts have stated that dilation is the single most important factor in the success rate of the procedure (Jackson, 1965; Cali and Pratt, 1968; and Morton, 1986).

Proper motivation

Emotional stability and maturity leading to proper motivation are necessary. Miss C in the first case history was and still is faced with many adolescent crises, including a definition of herself as a sexual being. Physically and emotionally, she is not at a peak level under which she can face such an all encompassing decision regarding her sexuality.

The decision for reconstruction, however, was not hers. Emergency surgery for haematocolpos and haematometris decided for her. The motivation to dilate herself was not there because she is a pubescent girl forced to cope with maturity. She faces many years of self-dilation before marriage.

Many options regarding her social life are limited due to her physical problems. Ultimately, she is faced with the aspects of reproduction, possible infection and, possibly, further surgery. She needs loving support and caring acceptance. All her questions should be answered honestly and on a level



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Clinical Case Histories - Vaginoplasty

Case History 1

Twelve-year old Miss C came to the emergency Department in early 1985 complaining of abdominal pain and pelvic mass. Emergency surgery discovered the congenital absence of 5 cm. of lower vagina. When the upper vagina was entered, an haematocolpos (retained menstrual blood caused by an imperforate hymen) and haematometra (retention of menstrual blood in the vagina and uterus) were found. Penrose drains were used to evacuate the area.

Operation of choice

In five days she returned to the operating room and the drains were removed. There was a reasonable cavity created between bowel and bladder but it was decided that there could not be sufficient dissection to pull the upper vagina down through to the introitus (the exterior orifice of the vagina). Therefore, a McIndoe-Read procedure with amnion mold became the operation of choice.

Foam was cut to approximate measurements and covered with two washed condoms. The condom mold was securely closed with #2 silk. Amnion, harvested and stored as discussed elsewhere, was prepared by stripping the chorion (leaving the marker), spread on the mold and sutured with silk. She was discharged five days later with this mold intact.

In two weeks, she returned to the operating room where the vulvar sutures and the mold were removed. The vagina appeared shiny, clean and healthy. Amnion "tags" were removed. A fine brownish discharge at the suture line was noted. A medium mold was inserted and it was planned to send her home with a small plastic mold for dilation. A chronic ooze was being managed and menstruation was to be controlled with the pill. Three days later, she returned home. See diagram D

Two months later, when menstruation was allowed, Miss C had her period, but then developed abdominal pain. She was admitted with fever and this abdominal pain. From the history, it was discovered that home dilation had not been consistent, and stenosis (constriction) was diagnosed. Ultrasound showed a mass in the vagina and another behind the uterus - a pyocolpos (accumulation of pus).

Surgery drained the vaginal mass and a needle aspiration confirmed a residual haemoperitoneum. Two catheters were placed in situ for drainage. The chance of having a hysterectomy to prevent further complications was a viable option at this point.

In eight days, the catheters were removed. The vagina looked good and there was no visible necrosis in the upper area. The lower vagina was

glistening and appeared almost normal. Miss C was discharged the next day with home care planned.

In a recheck at six months, Miss C stated that she was feeling a stenosis. Physical examination revealed an "hourglass" stenosis between the original and the new vagina. Again, in the operating room, a stenosis was found where the upper cavity had narrowed. Simple dilation stretched it slightly, proving its elasticity. Discharge from the hospital was within a week's time.

A further six month check, now in 1986, found Miss C well and having normal periods. Her vagina is good and has only a slight constriction.

Case History 2

At the age of 16, Miss R was diagnosed as having primary amenorrhea (delay of menarche). Further investigation found she had Rokitansky's syndrome (vaginal and mullerian agenesis), and a single horseshoe kidney. Her secondary sex characteristics were normal, but she lacked a vaginal vestibular dimple. She was followed until 23-years of age, when she requested reconstruction as she was engaged to be married. The (nonsurgical) Frank method of dilation (continuous pressure technique) was recommended, but proved to be unsatisfactory. Consequently, a McIndoe-Read was performed.

In the operating room, a transverse incision was made at the posterior facet. With blunt dissection, a perineal space was created on either side of the upper midline raphe of the perineum which was thicker than usual. This (space) was taken "two finger" lengths to the peritoneal cavity. The sponge mold was secured this time with 3-0 vicryl. The area was closed over the mold. The foley was left in place for two days and prophylactic antibiotics and colace were administered post-operatively.

Successful outcome

After a week, in the operating room, the stitches and mold were removed. Following irrigation and removal of dead amnion tags, the vagina looked good to its full length. A new mold of the same design was inserted and sutured in with #1 vicryl, which was to remain for seven days. Miss R was discharged home after self-dilation was explained.

In one month, the vaginal cavity measured six centimetres; in three months it contracted to three centimetres; but in four months it had dilated to seven centimetres. Today, Miss R is married and enjoys normal sexual activity.

where information is easily processed and understood. It must be remembered that Miss C is an adolescent, albeit, a very mature one.

On the other side of the continuum is Miss R. The reconstructive surgery was elective for her and the decision was made at an age and stage in her life when consequences are optional and totally controlled. Reproduction is only a factor by its absence. Her concept of self is better defined by virtue of age. For her, sexuality is a choice.

Pre, intra and post-op nursing care involve the physical care of any patient undergoing an anterior and posterior repair. Psychologically, the nurse follows the patient's lead and answers all questions honestly. Both of these patients underwent the same procedure, but because of very different circumstances, their nursing care needs are unique.

Vaginoplasty is done for a variety of reasons. There are many techniques for vaginal reconstruction using one's own tissues, another's tissues or no tissues at all. Each has its own advantages. The McIndoe-Read procedure has proven to be the most effective with the fewest number of serious complications. The addition of a newer form of mold with a new type of allograft has been used in England with success and now has been performed at the Ottawa Civic Hospital.

References

1. Ashworth, M.F.; Morton, K.E.; Dewhurst, Sir John; Lilford, R.J.; Bates, R.G., "Vaginoplasty Using Amnion," *Obstetrics and Gynaecology*, Vol. 67, No. 3, March, 1986; pp. 443-446
2. Cali, R.W.; Pratt, J.H., "Congenital Absence of the Vagina," *American Journal of Obstetrics and Gynaecology*, 1968, 100; pp. 752-763.
3. Counsellor, V.S.; Flor, F.S., "Congenital Absence of the Vagina," *Surgical Clinic of North America*, 1957, 37; pp. 1107-1118.
4. Dhall, K., "Amnion Graft for Treatment of Congenital Absence of the Vagina," *British Journal of Obstetrics and Gynaecology*, March, 1984; Vol. 91, pp. 279-282.
5. Faulk, W.P.; Stevens, P.J.; Burgos, H.; Matthews, R.; Bennet, J.P.; Hsi, B., "Human Amnion as an Adjunct in Wound Healing," *The Lancet*, May 31, 1980; pp. 1156-1157.
6. Jackson, I., "The Artificial Vagina," *Journal of Obstetrics and Gynaecology of the British Empire*, 1965, 72; pp. 336-341.
7. Jeffcoate, I.N.A., "Advancement of the Upper Vagina in the Treatment of Haematocolpos and

Haematometra Caused by Vaginal Aplasia," *The Journal of Obstetrics and Gynaecology of the British Commonwealth*, November, 1969, Vol. 76, No. 11; pp. 961-968.

8. Judin, S., "Surgery, Gynaecology and Obstetrics," 1927, 44; P. 530, cited in Cali, R.W., Pratt, J.H., "Congenital Absence of the Vagina."

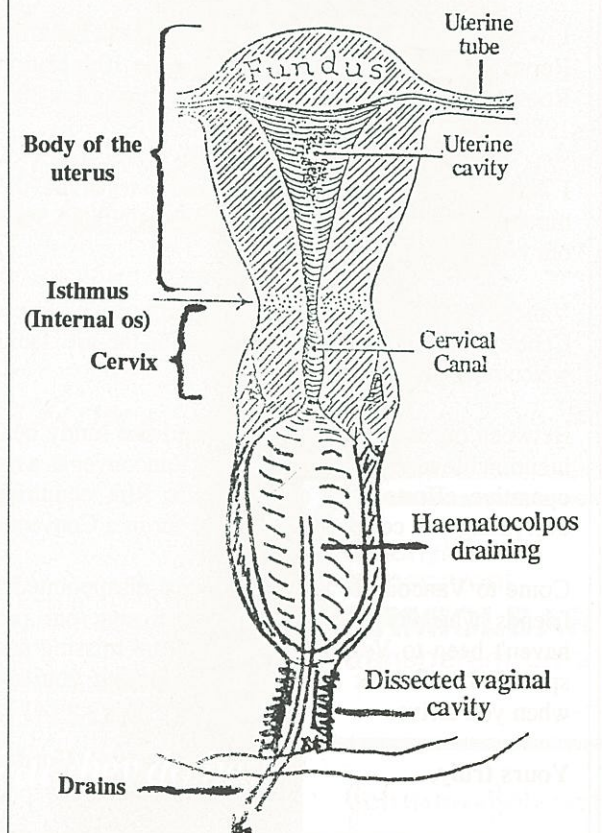
9. Khanna, S. and Khanna, N., "Congenital Absence of Vagina: An Analysis of 18 cases Corrected by the McIndoe Operation Using a Condom Mold," *International Surgery*, 1982, 67; pp. 345-346.

10. Morton, K.E., "Human Amnion in the Treatment of Vaginal Malfunction," *British Journal of Obstetrics and Gynaecology*, January, 1986, Vol. 93; pp. 50-54.

11. Williams, E.A., "Congenital Absence of the Vagina; A simple Operation for its Relief," *The Journal of Obstetrics and Gynaecology of the British Commonwealth*, August, 1964, Vol. LXXI, No. 4; pp. 511-512.

12. Word, B., *Southern Medical Journal*, Birmingham, Alabama, 44, 375. (Cited in Jackson, I., "The Artificial Vagina.").

Diagram D Anterior-posterior view showing haematocolpos draining



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Arthritis now listed as a sex-linked disease

Arthritis can now be added to the list of sex-linked diseases. The bacteria *Chlamydia trachomatis*, cause of the most common sexually transmitted disease, has also been identified as the cause of a previously unexplained form of arthritis, says a group of British researchers.

According to rheumatologist Dr. Josh Dixey of Westminster Hospital in London, England, Chlamydia is a significant cause of arthritis in young adults. Addressing delegates to a recent meeting of the American Rheumatism Association in Washington, Dr. Dixey mentioned that reactive arthritis of the knee is the most common form of arthritis in North American and U.K. young people.

About half of all reactive arthritis cases are associated with chlamydia infections in the genital tract, said Dr. Andrew Keat, a senior lecturer in rheumatology at Westminster. He suggested that young adults who present with a swollen knee most likely have reactive arthritis and should be checked for chlamydia infection or antigen in their joint fluid (synovium).

The British team, for the first time, identified chlamydia antigen in the joints of arthritic patients. In a well-controlled study, the researchers examined synovial fluid from ten patients with both genital tract inflammation and reactive arthritis. They also examined synovial fluid in 13 patients without genital tract inflammation, but with well-characterized rheumatic disease (the control group).

None in the control group, but six of the ten in the reactive arthritic group were identified as having the Chlamydia antigens in the synovium. Said Dr. Keat: "I wouldn't be surprised if higher than 50% of patients with chlamydia infections come down with reactive arthritis."

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The legal woes of appraising professional performance

By L.E. and F.A. Rozovsky

Introduction One of the more important aspects of quality assurance is the so-called "Professional Performance Appraisal." Designed to assess the quality of care provided by a nurse/caregiver, the process is seemingly a neutral, objective exercise.

But is it? Can a performance appraisal actually serve as a means for "getting back" at a nursing colleague? Is it really "objective?" Moreover, what are the legal responsibilities of those who complete the professional performance evaluation forms?

Questions such as these are not often addressed from a legal perspective. Nonetheless, it is important to do so in order to make certain that nurses understand their legal rights and responsibilities in such evaluative exercises.

Professional appraisals as a weapon

The operating room nursing staff may disagree with the supervisor. The supervisor may dislike someone on her staff. Friendly discussion does not resolve the problem. Perhaps the problem is too far advanced and any semblance of effective communication has long since ceased to exist. Personal animosities, distrust and anger can all play a part in what may come down to a "them against me" scenario.

One way to vent anger or to redress a perceived wrong is to "get back" at a supervisor or a member of the OR nursing staff through the professional performance appraisal. Few would admit this fact. A particularly negative performance appraisal may raise a few eyebrows in nursing administration. A series of negative evaluations will certainly provoke some action.

For those in nursing administration the seemingly "neutral" performance appraisal eliminates the prospect of biased evaluations. However, the forms and the process of evaluation are not designed to

discern improper motivations on the part of those completing performance appraisals. In the end, the weight attached to professional performance appraisals boils down to a test of credibility. Will nursing administration believe the evaluation reports or the nurse who is the subject of them?

Malice or good faith

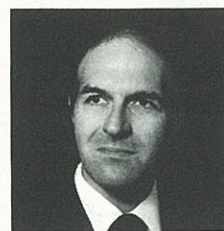
Negative professional performance appraisals are difficult to attack. What can the aggrieved nurse do to right the wrong perpetrated against her by fellow staff members? The answer is little, if anything can be done. The performance appraisal mechanism is based on the belief that staff will complete the forms in good faith. If someone acts with malice to discredit a fellow nurse, little can be done to show that there was a total absence of good faith.

From a legal point of view, the "victim" can

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follow internal appeal mechanisms—if any exist in the health facility. If the nursing staff is unionized, a grievance may be filed. Nonetheless, it remains a difficult task to redress the wrong of performance appraisals completed in the absence of good faith. Nursing careers can be ruined and years of valuable experience in supervisory roles can be given short shrift through an evaluative process ostensibly designed to assure quality patient care.

Legal responsibilities

The legal responsibilities of those completing performance evaluations should not be taken lightly. These evaluations can make or break a career. The same can be said of those whose role in nursing administration can be destroyed through malicious performance appraisals.

If the information contained in the appraisals is untrue, the "victim" may have a cause of action based on defamation. Moreover, if the employer knew or should have known that the information was unreliable but used the appraisals as a basis for firing the nurse, this could serve as valuable evidence in a "wrongful" dismissal lawsuit.

The responsibilities of the person completing the performance appraisals encompass another consideration. Not only do the evaluations afford an opportunity for "getting back" at a colleague, the appraisals allow nurses to "cover up" for the poor professional conduct of friends.

It is very difficult to indicate on a performance appraisal that a friend is not meeting the mark. There may be genuine concern that a negative appraisal may mean a demotion or dismissal. Nonetheless, it is patient care and safety that must be the priority in completing performance appraisals.

Basis for litigation

The failure to fulfill an evaluation properly can be the basis for litigation. If a nurse knew or should have known that a colleague was deficient in her work and the nurse failed to indicate this on the appraisal, the groundwork would be in place for negligence. If it could be proven that as a result of the errant report an incompetent nurse was permitted to carry on and injure a patient, it could be argued that the harm was reasonably foreseeable. This would satisfy the elements of a negligence lawsuit.

The responsibilities are great for those who com-

plete performance appraisals. There is need for professional objectivity with a focus on providing quality patient care. Personal differences and loyalties must be disregarded. Failure to do so can confound the results of professional performance evaluations resulting in harm to patients.

Practical solutions

There are some practical steps that can be followed to avoid the legal pitfalls of professional performance appraisals. What is needed is a system of accountability, education, and verification. The following is a checklist of suggestions for eliminating some of the more serious pitfalls:

1. Evaluation tools should be reviewed carefully to make certain that the forms and questions are indeed as "objective" as possible.
 2. The evaluation tools should be based on a written set of criteria known to all OR nursing staff and supervisory personnel.
 3. The evaluation tools should be designed to support the QA program.
 4. The evaluation process should be examined carefully in view of collective bargaining agreements and union requirements.
 5. A process should be in place for verifying both positive as well as negative appraisals.
 6. If outcome measurements are used, care should be taken to control for confounding variables which might "skew" the results of the appraisals.
 7. A system should be in place for the subject of a negative evaluation to challenge the results.
 8. Staff must understand the legal implications of filing an inappropriate performance appraisal.
 9. The criteria for appraisals should be reviewed periodically and updated as necessary, utilizing the services of legal counsel to make certain that changes are consistent with provincial law.
 10. Administration should develop mechanisms for staff to "vent" disagreements amongst themselves and with supervisory personnel so that professional performance appraisals are not used as weapons of revenge but as important tools for evaluating quality patient care.
- More could be added to this check list. The important point is to develop an action plan that best suits the needs of each facility. Once implemented, the plan should eliminate much of the concern about improper professional performance appraisals.

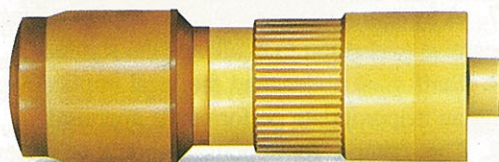
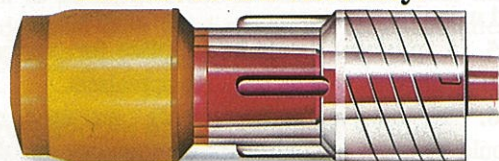
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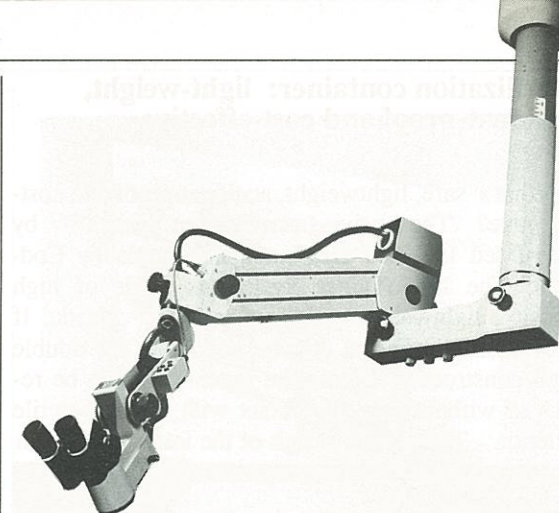
Davis + Geck, Cyanamid Canada Inc., Atria North, 2255 Sheppard Ave. E., Suite E440, Willowdale, Ontario M2J 4Y5 (416) 498-9405.

Ceiling suspension for microscopes: an economical & versatile alternative

The photograph at the top of the next column shows the CM-2301 ceiling suspension for surgical microscopes from Weck, division of Squibb Canada Inc. This ceiling suspension for microscopes, compatible with all Weck surgical microscopes, offers the following economical and versatile features: completely motorized functions; maximum safety and stability; optimal floor area; functional design; easy installation; standard conveniences.

The CM-2301 provides the stability and freedom of a ceiling-mounted microscope at the price of most floorstand models, according to the manufacturer. The unit frees up valuable floor space and assures safe storage of the optical assembly.

Also, among a number of other attractive features, the CM-2301, because of its simplistic, yet versatile



and flexible design, minimizes installation effort, particularly in its ability to accommodate lower ceilings. For more details contact:

Weck, Division of Squibb Canada Inc., 221 Amber St., Markham, Ontario L3R 3J7 (416) 477-6790.



Surgical procedure kits feature faster set-up, dispensing and counting

E-Pack* Procedure Kits are said to be faster, better and more economical. They eliminate the task of pulling, preparing, setting-up, dispensing, counting, taking inventory, reordering and receiving the thousands of sutures handled on an annual basis.

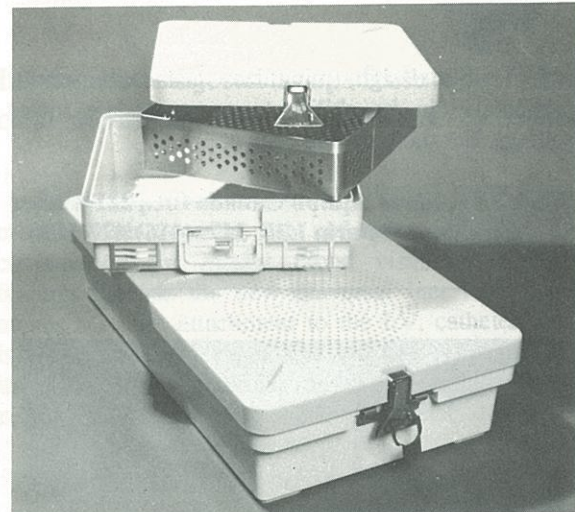
All sutures needed for a specific procedure are pre-assembled in one convenient, easily identifiable kit.

For additional information on the benefits of the E-Pack Procedure Kits contact your Ethicon Sutures representative, or:

Ethicon Sutures Ltd., 1421 Lansdowne St. W., Peterborough, Ontario K9J 7B9 (705) 743-2220.

Sterilization container: light-weight, accident-proof and cost-effective

What's safe, lightweight, accident-proof and cost-effective? The new InstruTainer System™ by InstruMed Inc. and distributed in Canada by Codman! The InstruTainer System is made of high density, lightweight and heat resistant plastic. If accidentally dropped, it will not bend. Its double wall construction allows the inner basket to be removed without fear of contact with the non-sterile exterior. The unique design of the latch mechanism

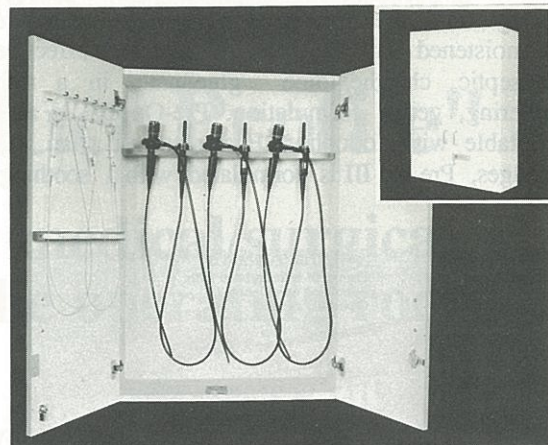


doubles as a handle to assure the ease of removing the top aseptically. Four sizes of containers and two sizes of baskets fit all your needs, eliminating the need for much larger systems. Security locks prevent tampering and colour codes indicate surgical specialties. Also, an interior sterilization indicator is visible from the outside. For additional information:

Codman, Division of Surgikos Canada Inc., 1421 Lansdowne St. W., Peterborough, Ontario K9J 7B9. Telephone, Ontario: 1-800-461-7693. All other provinces 1-800-461-7664.

Wall mounted cabinet designed to accommodate flexible fiberoptics

Carsen Medical & Scientific Co. Ltd., exclusive Canadian distributor of Olympus Fiberoptics has introduced a wall mounted cabinet specifically designed to accommodate flexible fiberoptics and accessories in a secure environment. Measuring 38" high X 27" wide and 8" deep, the cabinet holds three bronchoscopes or ENT scopes and accessories in a vertical position. These cabinets are made to provide years of constant use. All surfaces, inside and out,



are finished in a durable off-white laminated material for quick, efficient cleaning. Doors have heavy-duty concealed hinges and each cabinet is equipped with a lock and two keys. For literature and more details:

Mr. William Vella, Sales & Marketing Manager, Carsen Medical & Scientific Co. Ltd., 151 Telson Road, Markham, Ont. L3R 1E7 (416) 479-4100.



Operating table is versatile enough to be six specialty tables in one

The Champagne Radi-Op 1900RC operating room table does the job of six individual specialty tables, and it does it easier, better and less expensively. One Radi-Op can be six things to all people: (1) it's a C-Arm table; (2) a general surgery table; (3) a back-up urological table; (4) an EENT table; (5) a neuro-surgical table; and (6), an orthopaedic table (when traction is not required). No matter what function the Radi-Op performs, it gives even more versatility. It raises and lowers on its pedestal, tilts laterally and provides longitudinal slide, allowing the table to be moved toward the head or foot end for better C-Arm and surgical team access.

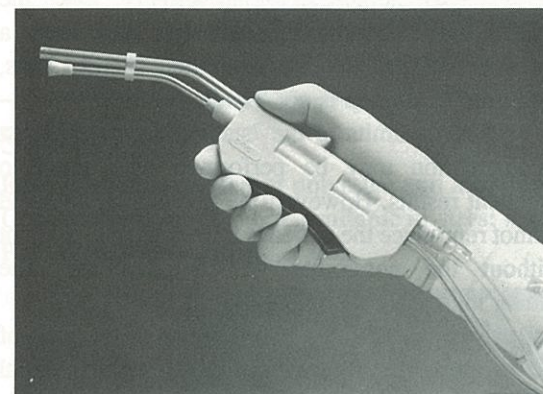
Also, the back and leg sections both elevate to a

sitting position. The leg section also folds down, out of the way. The sealed hydraulic system is available in either manual or power, with remote control offered with the power version. For more information contact:

Smith & Nephew Inc., 2100, 52 Avenue, Lachine, Quebec H8T 2Y5 (514) 636-1684.

Suction/irrigation device makes pulsed lavage a simple undertaking

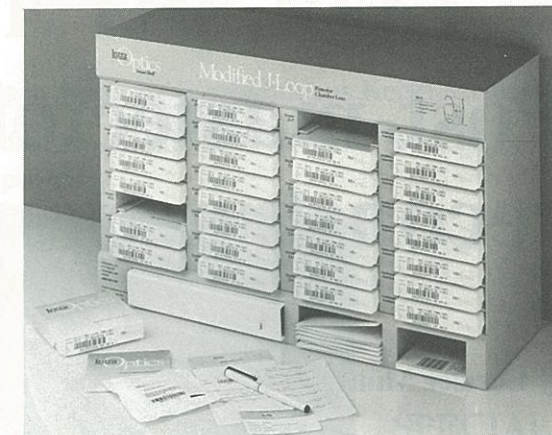
Consistent with its reputation as an innovator in hospital technology, Bard Canada Inc. recently introduced two outstanding new products to the Canadian market. The Simpulse™ Suction/Irrigator by Davol puts control of pulsing irrigation where it belongs - in the hands of the surgeon. With this device, shown below, the need for mechanical



pumps in pulsed lavage is eliminated and replaced by a simplified unit which provides variable, gentle-to-firm pulsation and irrigation in the same handpiece. A single-use system, the Simpulse Suction/Irrigator is sterile and ready to use, taking only 60 seconds to set up for proficient cleansing and debridement. The total cost is about the same as other pulsed lavage disposables, but without "hidden" equipment clean-up and sterilization.

Designed to facilitate dilation of the intramural ureter, the new, Bard® Trans-ureteroscopic Balloon Dilation Catheter advances the ureterscope without the inconvenience of cytoscopic insertion and exchange of instruments. The catheter features a 4.5 Fr. radiopaque shaft which is easily inserted through a 5 Fr. working channel. For more details on either of these new technological innovations contact:

Bard Canada Inc., 2345 Stanfield Road, Mississauga, Ontario L4Y 3Y3 (416) 275-8000.



Unique IOL lens handling system introduced by IntraOptics, Inc.

An innovative means for organizing and maintaining inventory of intraocular lenses has been introduced by IntraOptics. The "Smart-Shelf" (™) Consignment System is a lightweight, molded plastic unit designed to display varying quantities of lens models manufactured by IntraOptics. The Smart-Shelf offers four levels of consignment lens inventory tailored to suit specific needs of ophthalmologists, both in lens implant volume and in lens powers. Distribution of dioptors for each of four Smart-Shelf levels has been determined according to statistical model of lenses most frequently used. As a result, users receive the lens powers most commonly needed for ophthalmic surgery, yet still have an ample number of outlying powers.

IntraOptics Canada, Inc., 80 West Beaver Creek Road., #7, Richmond Hill, Ontario, L4B 1H3

High performance electrode offers optimal gel-skin contact

A high performance foam monitoring electrode that is thinner, more comfortable and offering more gel-skin contact than other foam electrodes has been introduced by 3M Canada.

The new, high performance "Red Dot" brand monitoring electrode offers a low profile and exceptional trace quality, with lower skin impedance than other electrodes. A newly designed column of solid gel, with no stiff retaining ring, gives the new electrode the greatest gel-skin contact area of any solid gel "Red Dot" electrode. More details from:

Hospital Health Care Products, 3M Canada Inc., P.O. Box 5757, London, Ontario N6A 4T1

Post-mastectomy breast reconstruction... A new life

By Coralee Müller, R.N.

Mastectomy is the surgery most feared by women. It is the surgery many women never thought possible. One out of every 11 women in Canada will be faced with the issue of breast cancer and the excision of the breast, or a mastectomy.

The disturbance of the body image common to the loss of any body part is greatly magnified when that part is the breast. This is due, understandably, to the high emotional feelings associated with this part of the body.

Terrifying experience

Reconstructive surgery occasioned by the loss of a breast can have a great impact on female nurses as they must deal with this threat both as women and as nursing specialists with the responsibility of providing support to patients undergoing surgery.

At one time, I felt that the threat of a mastectomy was one of the most terrifying experiences ever to be faced. However, after having been involved with post-mastectomy breast reconstruction procedures, I now feel that, although the threat remains, reconstruction offers a method to deal with this disturbance of body image.

Many women, if they knew of the possibility of breast reconstruction would probably seek consultation and treatment at an earlier stage, rather than waiting until the disease has progressed to a stage where the prospects of a satisfactory cure are diminished.

With the offer of an acceptable reconstruction prior to a mastectomy, the patient may be much more accepting of the proposed procedure. It is seen now in a less destructive light.

There are many reasons why women are motivated to seek breast reconstruction. Although some are unable to cope with the disfigurement, others have no emotional need for reconstruction. Possibly, too, their anxiety about additional surgery, after the mastectomy itself, is so great that they have a genuine acceptance of loss of their breast. Thus, breast reconstruction is not for all.

Within the limits of the "state of the art," breast reconstruction may be performed with good to excellent results. However, the procedures involved cannot reproduce the patient's former breast - and not without the possibility of complications. The patient must be made aware of this.

Breast reconstruction can be done at the time of the surgical mastectomy, depending on the initial surgery, and if the tumor is less than 2 cm. This is not a common practice, as most plastic and reconstructive surgeons like to wait three months to allow the incised surgery site to settle.

Immediate reconstruction does have its benefits; however, because the patient has never seen the

About the author

Coralee Müller, R.N., is the Head Nurse, Plastic and Reconstructive Surgery, Health Sciences Centre, Winnipeg, Manitoba. She received her R.N. from the

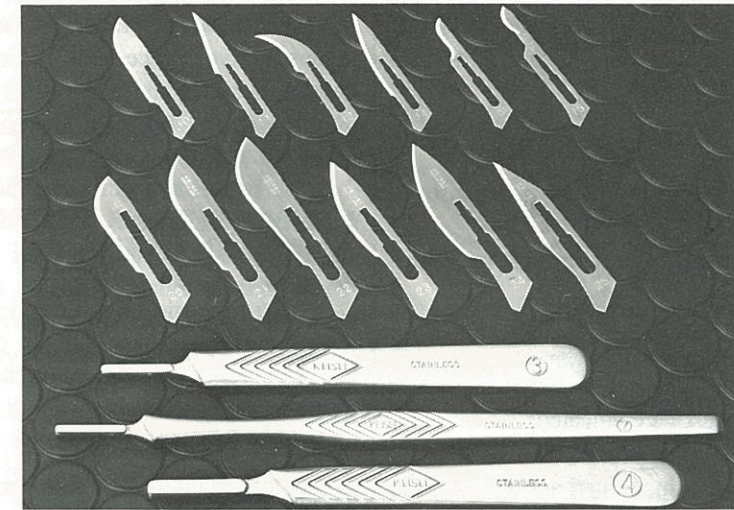


Regina Grey Nuns Hospital School (Pasqua Hospital where she also obtained her certificate in Nursing Unit Administration. Coralee, whose career has primarily been in the operating room, has worked in major hospitals in Regina, Edmonton, Winnipeg, and overseas, in Australia.

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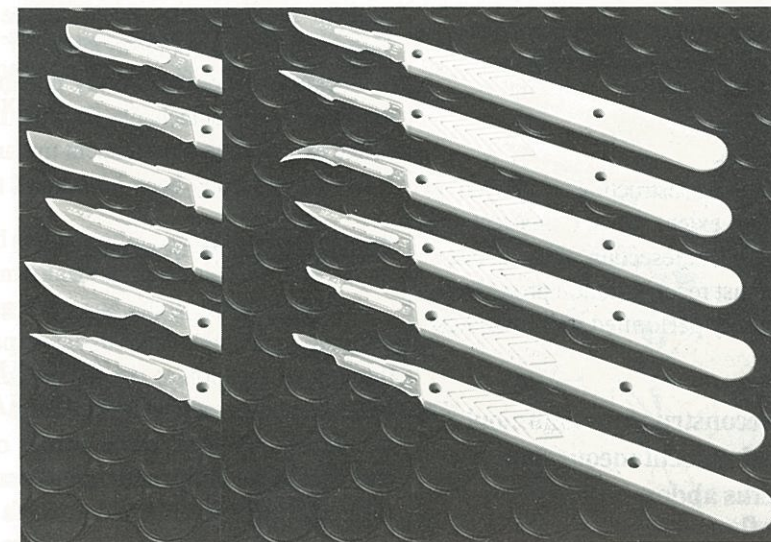
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deformity, she may have difficulty being objective or satisfied with the results.

There has been a marked change in attitude toward breast reconstruction following mastectomy. This has been due to the following reasons:

- Increased technology has allowed earlier detection of minimal lesions;
- Increased use of modified radical mastectomy that preserves the pectoralis major muscle and allows for easier reconstruction;
- Patients are now more aware of and interested in reconstruction;
- There has been vast improvements in reconstructive techniques;
- Apparent lack of interference with post-op evaluation of recurrence and follow-up.

Indications for breast reconstruction:

- Localized disease must be eradicated;
- The mastectomy site must be stable;
- The patient is properly motivated and has realistic expectations of the outcome.

Contraindications for breast reconstruction:

- a large invasive tumor with questionable local eradication or, extensive chest wall or axillary metastases;
- extensive disease involving other body systems;
- lack of motivation on the part of the patient.

Types of procedures

The type of breast reconstruction employed is directly related to the extent of the mastectomy incision and type of surgical resection of the breast.

There are several breast reconstruction procedures. The three most commonly performed will be addressed in this submission:

- (1) Submuscular reconstructive mammoplasty
- (2) Latissimus dorsi myocutaneous flap
- (3) Transverse rectus abdominus myocutaneous flap

If there is good quality skin and tissue at the mastectomy site and the pectoralis major muscle is present, the procedure of choice is submuscular reconstructive mammoplasty. This procedure involves the use of a temporary tissue expander and second stage replacement with a permanent mammary pros-

thesis. Recently marketed breast implants, however, may allow for one-stage procedures.

If the skin and tissue overlaying the mastectomy defect is of poor quality or the pectoralis major muscle is missing, tissue must be brought in.

The procedure of choice is either a latissimus dorsi myocutaneous flap or a transverse rectus abdominus myocutaneous flap (TRAM). These are single stage reconstructive procedures which use either the latissimus dorsi muscle or the rectus abdominus muscle with the required amount of skin necessary to correct for the mastectomy defect.

1. SUBMUSCULAR RECONSTRUCTIVE MAMMOPLASTY

Tissue expansion was first described in 1957 but it was not until 1976 that the concept was put to use. The procedure is based on the inherent ability of tissue to increase in size when it is stimulated by an underlying expansile force.

Types of tissue expanders

1. Radovan (Heyer Schulte) silastic bag with a remote fill valve.
2. Lapin (Dow Corning) silastic bag with the fill valve within the unit.
3. Customized tissue expanders designed to meet specific requirements. (Note, tissue expanders can vary in size from 200ml to 800ml).
4. Becker expander/mammary prosthesis. This tissue expander has a detachable fill tube that converts the tissue expander to a permanent mammary prosthesis. It has only recently been introduced to the market.

The surgical procedure

The patient is in the supine position during the surgical procedure. The tissue expander is placed through an incision at the lateral tail of the original oblique scar or at the level of the proposed infra-mammary line. The lateral border of the pectoralis major muscle is elevated and a submuscular and subfascial pocket is developed (See illustrations on the following pages).

The tissue expander is inserted and filled to tissue tolerance. The incision is closed.

Subsequent fills, to tissue and patient tolerance, are done in the office weekly. The tissue is expanded to the required size and overinflated 20%. A 4-6 week time span is then allowed for scar and capsule

activity to subside and to gain as much stretch as possible. The patient then returns to the hospital for the second stage reconstruction.

The incision for the second stage reconstruction is made at the midportion of the original scar, or at the proposed infra-mammary line. The tissue expander is removed and the permanent prosthesis is placed in the created space. Suction drains are used and the incision is closed.

Post-operatively the breast is supported by a non-binding brassiere. The prosthesis should be moved daily starting about the fourth day post-operatively.

If a Becker expander/mammary prosthesis is used, the 2nd stage reconstruction is eliminated. After the implant is filled to its final volume the remote fill tube is detached in the office under a local anaesthetic, thereby converting the tissue expander to a permanent mammary prosthesis.

Advantages

1. A simple procedure with few complications.
2. There are no skin colour, texture and hair bearing quality discrepancies as local tissue is used.
3. Transfer of distant tissue is unnecessary, therefore an additional operative site is not required.

Disadvantages

It is a 2-stage procedure, unless a Becker expander/mammary prosthesis is used (which is a one stage operation).

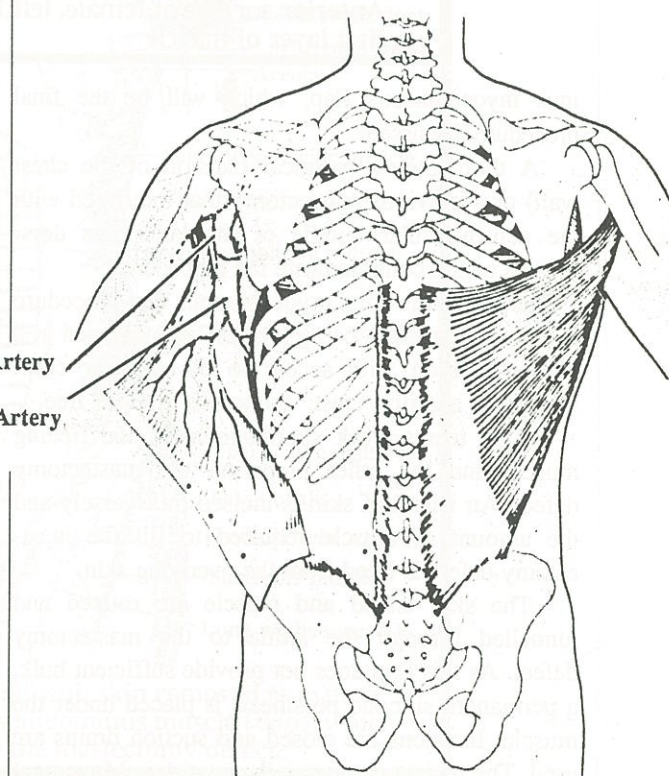
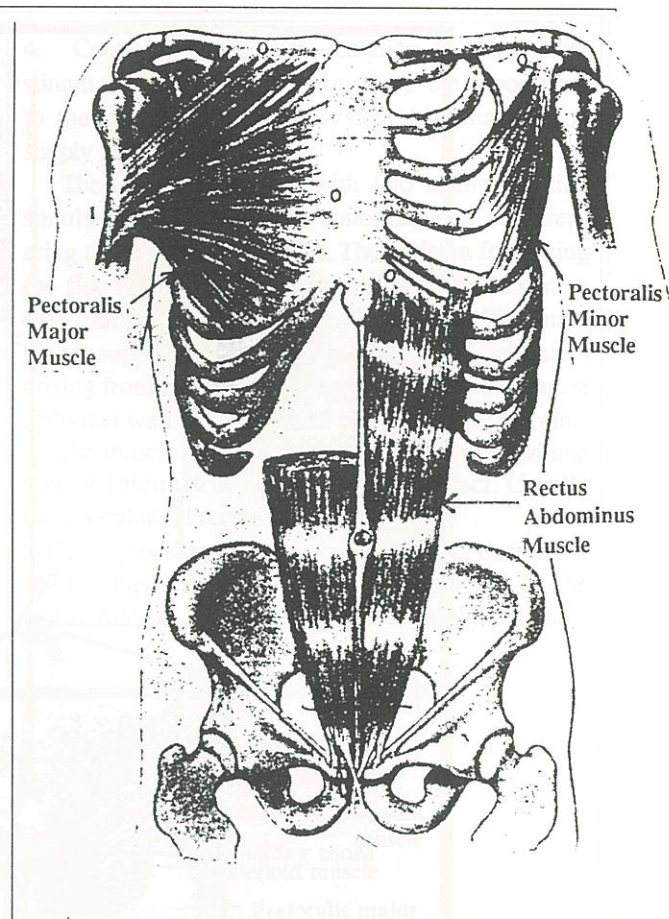
Complications

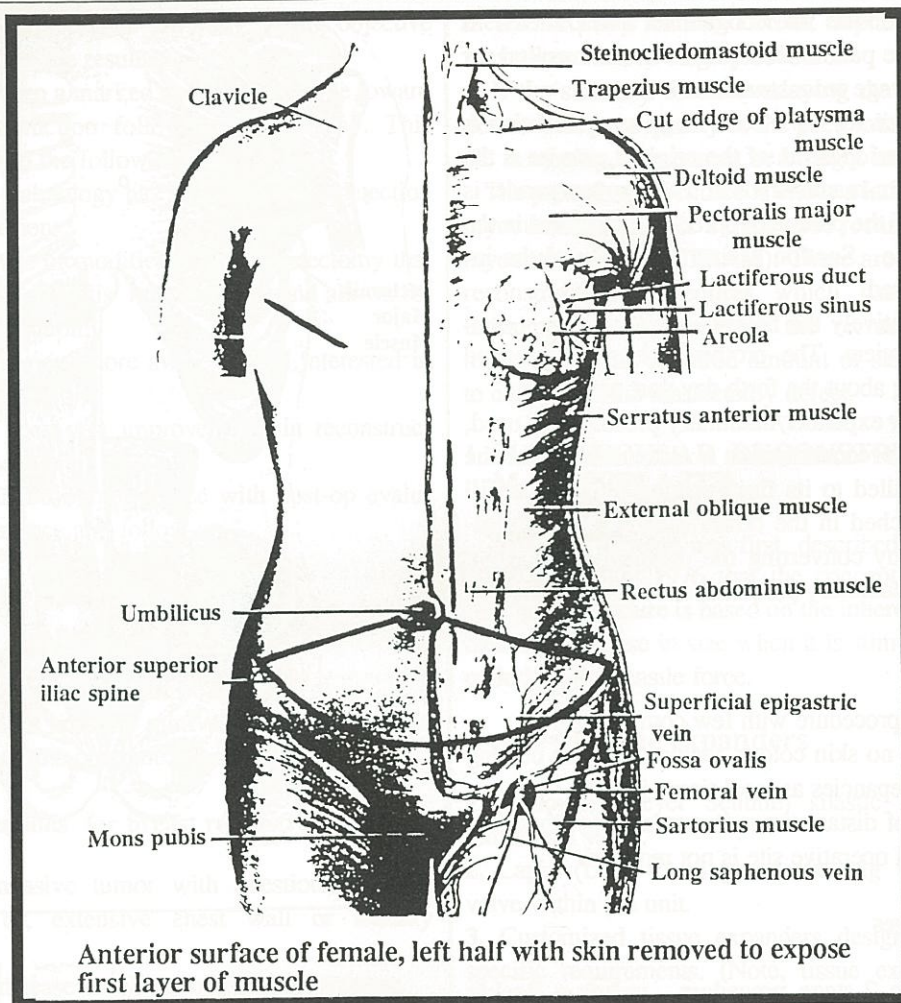
Implant related complications with submuscular reconstructive mamoplasty include capsule formation, malposition of implant, and extrusion of implant

2. LATISSIMUS DORSI MYOCUTANEOUS FLAP

This procedure was first described in 1896 but was abandoned for the most part until recently. The latissimus dorsi muscle arises from the midline back at the lower 6 thoracic vertebrae to the posterior crest of the ilium and inserts in the humerus.

The vascular supply is the thoracodorsal artery arising from the subscapula artery (See adjacent illustration). This flap is used when abdominal scars contraindicate the use of a transverse rectus abdom-





Anterior surface of female, left half with skin removed to expose first layer of muscle

inus myocutaneous flap, which will be the final procedure discussed.

A thoracotomy (surgical incision of the chest wall) or a previous mastectomy that interfered with the neurovascular bundle of the latissimus dorsi muscle would contraindicate the procedure.

The latissimus dorsi myocutaneous flap procedure involves the patient being prepped and draped in a lateral position with access to the anterior chest wall, back and iliac crest; the arm is draped free.

Two teams work simultaneously, one freeing muscle and the other preparing the mastectomy defect. An island of skin is incised transversely and the amount of muscle required to fill the mastectomy defect is freed from the overlying skin.

The skin island and muscle are rotated and tunnelled through the axilla to the mastectomy defect. As this flap does not provide sufficient bulk, a permanent silicone prosthesis is placed under the muscle. Incisions are closed and suction drains are used. The patient can be up the next day. Movement

of the arm is not restricted. However, the patient is instructed not to lift or stretch the arm.

Advantages

1. The procedure provides a large composite flap of skin, fat and muscle which is readily available with an excellent blood supply.
2. The latissimus dorsi muscle is expendable with very little loss of function.

Disadvantages

1. The procedure results in additional scarring of the back. This scar, however, is usually inside the posterior axillary fold and, thus beneath the brassiere.
2. The skin colour will be different.

Complications

1. There can be damage to the axillary contents

(brachial artery, vein or brachial plexus) which results during the dissection of the pedicle

2. Possible palsy of the long thoracic nerve with resulting winging of the scapula.

3. TRANSVERSE RECTUS ABDOMINUS MYOCUTANEOUS FLAP

This procedure was initially described in 1982. It is used when the latissimus dorsi muscle is denervated. It is the procedure of choice when the use of distant tissue is necessary.

Contraindications

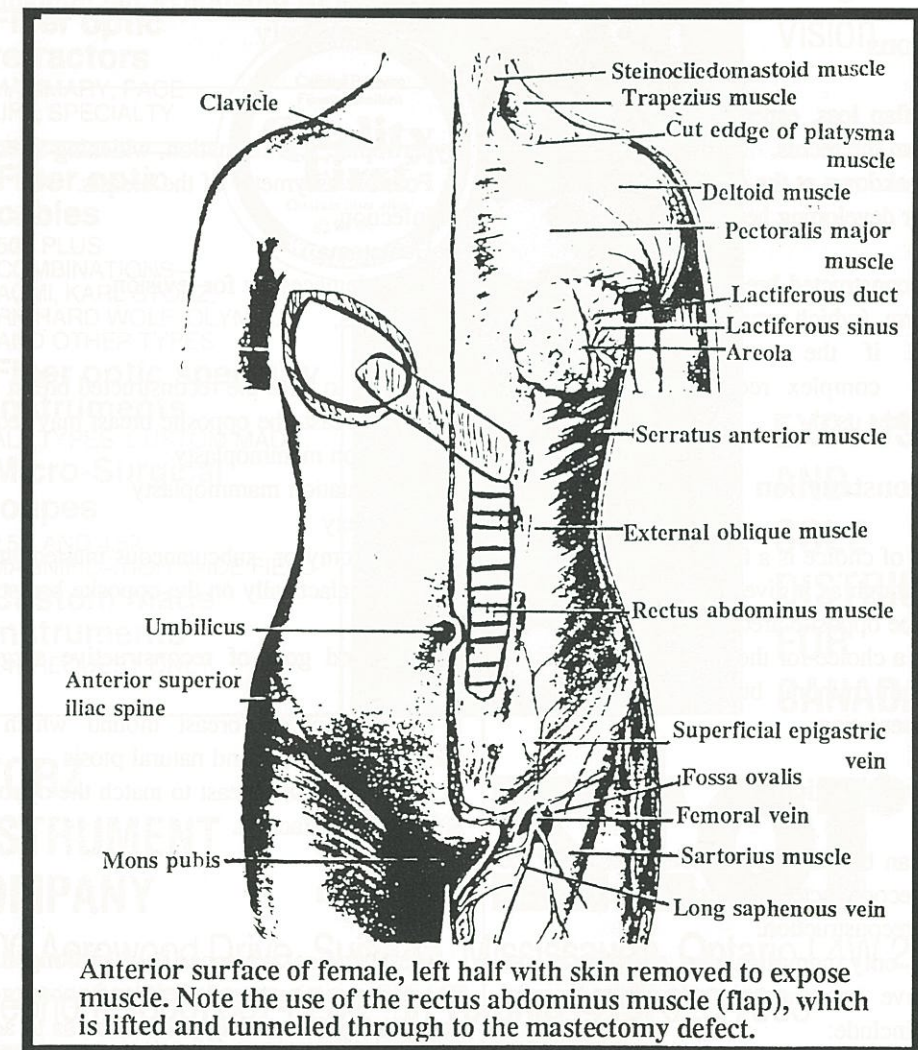
1. Contraindicated with obese patients.
2. Contraindicated when previous abdominal or thoracic surgery interfered with blood supply to rectus.
3. Contraindicated if further pregnancies planned.

4. Contraindicated when radiation to the mediastinum or base of the flap impaired the blood flow to the superior epigastric system (the main blood supply to the flap).

The patient is supine with two teams working simultaneously, one at the donor site and one preparing the mastectomy defect. The incision for raising the flap is from the superior anterior iliac crest to crest, umbilicus and supra pubic region. The main blood supply is from the perimbilical perforators arising from the superior epigastric artery. The entire abdomen wall is undermined past the costal margin.

The muscle pedicle with the skin flap is lifted and tunneled through to the mastectomy defect. Usually the contralateral rectus muscle is used.

The flap is shaped and de-epithelized as necessary. Marlex mesh is used to fill the defect left in the rectus muscle. The umbilicus is brought out thro-



Anterior surface of female, left half with skin removed to expose muscle. Note the use of the rectus abdominus muscle (flap), which is lifted and tunnelled through to the mastectomy defect.

ugh a new opening. Incisions are closed, and suction drains used. The patient remains on bed rest for one day post-op and restricted activities for two weeks.

Advantages

1. There is no need for mammary prosthesis as a large amount of tissue and fat is available.
2. The abdominal skin gives a more favourable colour match.
3. The donor site is less conspicuous than that of a latissimus dorsi flap.
4. The resulting abdominoplasty is an added benefit.

Disadvantages

1. It is a more difficult procedure with a higher rate of complications.
2. Procedure can result in abdominal weakness.

Complications

1. Potential flap loss, especially the distal portion of the skin from the rectus.
2. Wound breakdown at the abdominal incision.
3. Potential for developing hernia.

After the reconstructed breast has had a chance to drape and form (which usually takes four to six months) and if the patient still desires a nipple/areolar complex reconstitution, there are several techniques used.

Areolar reconstruction

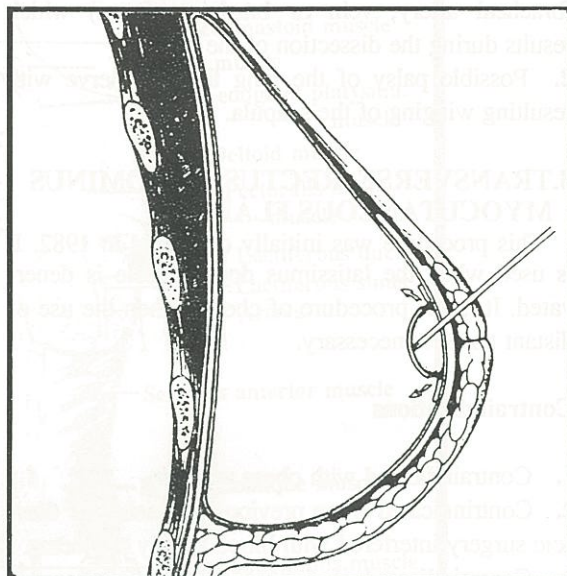
- The method of choice is a full thickness skin graft from the inner thigh as it gives best colour tones.
- Sharing of the opposite areolar complex.
- Tattooing is a choice for the future.
- Use of labium minora, but can be problematic with dark pigmentation.

Nipple reconstruction

- The nipple can be made from local flaps from the area of the reconstructed breast chosen for the nipple/areolar reconstruction.

Thus far, only complications specific to the procedures have been mentioned. Some general complications include:

1. Scar related, such as contractures; keloid and



Above is an artist's representation of the percutaneous inflation of the implant postoperatively

1. hypertrophic scar formation, widening of scars.
2. Possible assymetry of the breasts.
3. Infection.
4. Hematoma.
5. Possible necessity for revision.
6. Flap loss.

In order to have the reconstructed breast match the opposite breast, the opposite breast may require:

- Reduction mammoplasty
- Augmentation mammoplasty
- Mastopexy
- Mastectomy or subcutaneous mastectomy performed prophylactically on the opposite breast.

The end goal of reconstructive surgery is to provide:

1. A symmetrical breast mound which contains adequate projection and natural ptosis
2. A reconstructed breast to match the opposite one
3. Patient satisfaction.

Conclusion

Technological advances have prolonged survival. The cancer patient needs help and encouragement in normalizing their living patterns so as to achieve an optimal level of physical, psychological and social

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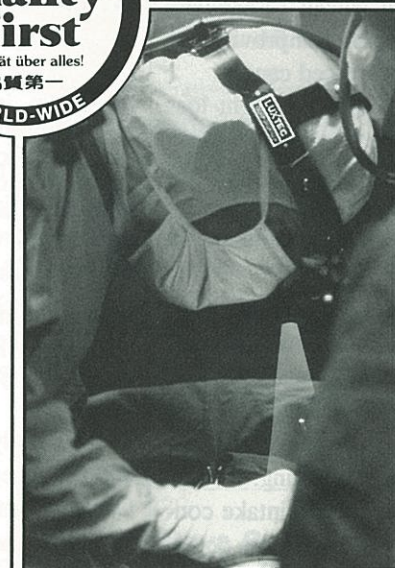
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functions. It is my hope that we, as nurses, now will be better able to provide an intervention program of informational support to improve patient adjustment to mastectomy. ■

References

- Advances in Plastic and Reconstructive Surgery, 1984, I, 95-145.
 Bostwick, J, Anaesthetic and Reconstructive Breast Surgery, The C.V. Mosby Company, Toronto, 1983.
 Cohen, J., Cullen, J.W., and Marlen, L., Psychosocial Aspects of Cancers, Raven Press, New York, NY, 1982.
 Converse, J.M., Reconstructive Plastic Surgery (2nd edition), W.B. Saunders Co., Toronto, 1977.

- Flig, S.A. and McLelland, R., Breast Carcinoma: Current Diagnosis and Treatment, Mason Publishing USA, Inc., New York, NY, 1983.
 Gant, T.D. and Vasconez, L.O., Post-mastectomy Reconstruction, the Williams & Wilkins Company, Baltimore, 1981.
 Georgiade, N.G., Reconstructive Breast Surgery, the C.V. Mosby Company, St. Louis, MO, 1976.
 Goin, J.M. & Goin, M.K., Changing the Body: Psychological Effects of Plastic Surgery, the Williams & Wilkins Company, Baltimore, MD.
 Grabb, W.C. & Smith, J.W., Plastic Surgery (3rd Ed.), Little Brown & Company, Boston, 1983.
 Phipps, W.J., Long, B.C. & Woods, N.F., Medical-Surgical Nursing Concepts and Critical Practice (2nd Ed.), the C.V. Mosby Co., Toronto, 1983.

Study reveals that new hormonal drug provides unexpected weight gain to cancer patients

A study published in the March 6, 1987 issue of the *Journal of the American Medical Association (JAMA)*, reports the results of using the hormonal drug megestrol acetate (Magace™) to treat advanced breast cancer. The results of the study have generated interest in further study among cancer researchers dedicated to reversing weight loss and improving the quality of life of patients with advanced cancer.

For many cancer patients, dramatic weight loss brought on by the disease or its treatment can mean more than a loss of self-image - it can severely inhibit the fight for survival.

Anorexia and cachexia

Weight loss is one of the most visible and debilitating side effects of cancer. Patients often lose their appetites (anorexia) due to changes in their senses of taste and smell. They experience a feeling of being full and have less energy for eating.

As the disease progresses and caloric intake continues on its downward spiral, undernutrition accelerates to the point of cachexia or loss of tissue mass. The result is further malnutrition and reduced energy to cope with treatment, or to fight off the disease and its complications.

"This wasting of the cancer patient to skin and bones has a profound impact on his or her quality of life," says U.C.L.A. oncologist Simon Tchekmedyian, who is currently studying anorexia and cachexia in patients with advanced cancer.

"Not only do we have to deal with the psychological side-effects of a loss of body image, but

these eating problems can be very stressful for both the patient and the family," he said. "Imagine sitting at the table and not being able to eat, of actually being nauseated by the smell of food."

When patients deteriorate to the point of cachexia, they become debilitated and often die, notes Dr. Tchekmedyian. In fact, many advanced cancer patients die of malnutrition rather than the disease itself. So it's important that cancer patients eat nutritiously and maintain their weight to give themselves the best possible chance of coping with both the disease and the treatment. Many of the traditionally used methods to control this type of weight loss (intravenous feeding of nutritional supplements) have met with little success.

Appetite enhancement

The study was conducted by Dr. Tchekmedyian and Dr. Joseph Aisner of the University of Maryland Cancer Centre to determine whether high doses of megastrol acetate would effectively treat patients with stage IV breast cancer (cancer that has spread from the breast to the bones, lungs or liver). The results of the study revealed weight gain and appetite enhancement in virtually all patients observed.

According to Dr. Tchekmedyian, 27 of the 28 patients treated gained weight following six weeks on high doses of megastrol acetate. Prior to the treatment, 13 of the 28 were severely underweight and had no appetite. Study team evaluators confirm that the weight gain consisted of true body mass, not edema (bloating or swelling of the tissues).

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 The Moncton Hospital
 135 MacBeath Ave.
 Moncton, N.B. E1C 6Z8

ORNAC Vice-president

Sylvia Humphries
 O.R. Supervisor
 Western Memorial Regional Hospital
 West Valley Road
 Corner Brook, NFL A2H 6J7

ORNAC Treasurer

Shirley Hemerling
 Staff Nurse
 Kelowna General Hospital
 2263 Pandosy St.
 Kelowna, B.C. V2Y 1T2

ORNAC Secretary

Dorothy Orr
 Head Nurse - O.R., R.R., C.S.R.
 Brooks Health Centre
 Bag 300
 Brooks, AB T0J 0J0

Provincial Representation/ORNAC

Note: Each province is allowed two 'Provincial Representatives' to sit on the ORNAC Board. Usually, these individuals are either a provincial O.R. association President, President Elect, or someone appointed by a provincial association executive.

Newfoundland/Labrador Operating Room Nurses Association (N&LORNA) (88)

President/Board Member - ORNAC

Ann Hughes
 Head Nurse - OR
 Health Science Centre
 Prince Philip Dr.
 St. John's, NF A1B 3V6

Past-president/Board member - ORNAC

Sylvia Humphries
 O.R. Supervisor
 Western Memorial Hospital
 West Valley Road
 Corner Brook, NF A2H 6J7

P.E.I. Operating Room Nurses Group (PEIORNG) (87)

President/Board Member - ORNAC

Margaret Doyle
 Head Nurse - OR
 Queen Elizabeth Hospital, Box 6600
 Charlottetown, PEI C1A 8T5

Vice-president/Board Member - ORNAC

Deborah Roberts
 Staff Nurse
 Queen Elizabeth Hospital
 Box 6600
 Charlottetown, PEI C1A 8T5

Nova Scotia Operating Room Nurses Group (NSORNG) (87)

Past Chairperson/Board Member - ORNAC

Mary Sterling
 Team Leader
 Victoria General Hospital
 Tower Road
 Halifax, N.S. B3Y 2Y9

Board Member - ORNAC

Mary MacAdam
 O.R. Staff Nurse
 Victoria General Hospital
 Tower Road
 Halifax, N.S. B3Y 2Y9

(Continued overpage)

New Brunswick Operating Room Nurses Group (NBORNG) (87)

Past President/Board Member - ORNAC

Lynne McLaughlin
Staff Nurse
St. John Regional Hospital
Box 2100
Saint John, N.B. E2L 4L2

President/Board Member - ORNAC

Judy Wheeler
O.R. Supervisor
Hotel Dieu Hospital
Box 187
Perth, N.B. E0J 1V0

Quebec Operating Room Nurses Association/Infirmière et infirmiers de Salle d'opération du Québec (88)

Co-président/Board Member - ORNAC

Mariette Forgues Guay
Hôtel-Dieu de Lévis
143, rue Wolf
Lévis, Québec
G6V 3Z1

Co-président/Board Member - ORNAC

Louise Christen
Centre Hôpital Jeffery Hale
1250 Chemin Ste. Foy
Quebec City, Quebec G1S 2M6

Operating Room Nurses Association of Ontario (ORNAO) (87)

President/Board member - ORNAC

Carole Starr
Unit Supervisor
Peterborough Civic Hospital
Weller St.
Peterborough, Ont. K9J 606

President Elect/Board member - ORNAC

Carol Lenox
Nurse Clinician - OR/RR/Day Surgery
Mississauga Hospital
100 Queensway West
Mississauga, Ont. L5B 1B8

Manitoba Operating Room Nurses Association (MORNA) (87)

President/Board Member - ORNAC

Sharon Hodge
Head Nurse - Angiography
Health Science Centre
800 Sherbrooke St.
Winnipeg, Man. R3A 1M4

President Elect/Board member - ORNAC

Bev Popowich
Clinical Instructor - OR/PARR
Misericordia General Hospital
99 Cornish Ave.
Winnipeg, MAN. R3M 1E2

Saskatchewan Operating Room Nurses Group (SORNA) (87)

Co-ordinator/Board Member - ORNAC

Darlene Stuttard
Manager O.R. Nursing
Saskatoon City Hospital
7th Ave. & Queen St.
Saskatoon, Sask. S7K 0M7

Board Member - ORNAC

Margaret Hayes
O.R. Nursing Co-ordinator
Regina General Hospital
1440 - 14th Ave.
Regina, Sask. S4P 0W5

Operating Room Nurses of Alberta (ORNA) (87)

President/Board Member - ORNAC

Marge Ensminger
Medicine Hat District Hospital
666 5th St. S.W.
Medicine Hat, AB
T1A 4H6

President Elect/Board Member - ORNAC

Jackie Waisman
Red Deer Regional Hospital
3942 50 A Ave.
Red Deer, AB
T4N 4E7

British Columbia Operating Room Nurses Group (BCORNG) (87)

President/Board Member - ORNAC

Susan Knoll
GDN/Consultant
St. Vincent's Hospital
749 West 33rd St.
Vancouver, B.C. V5Z 2K4

President Elect/Board Member - ORNAC

Lorna Murphy
General Duty Nurse
B.C. Children's Hospital
4480 Oak St.
Vancouver, B.C. V6H 3V4

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- Renew subscription to O.R. Journal**
- Finish final draft of article to Journal**

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Diseases we take for granted kill millions in Third World

Most of us living in Canada and other developed countries take for granted the great strides we have made in immunization.

We are, in many ways, complacent about the disease prevention efforts that are in place. We have come to see measles as harmless, diphtheria as exotic and tuberculosis as historic. The rich country we live in seldom encounters whooping cough or tetanus, and not one case of polio has been reported in years.

Yet, in the developing world, infectious diseases are an enormous threat to child survival:

Measles - This disease affects 67 million children every year. It accounts for 2 million deaths with complications causing pneumonia, ear infection, blindness and encephalitis.

Diphtheria - One in ten Third World children with throat infection caused by diphtheria die.

Whooping cough - This disease causes 600,000 deaths a year in developing countries.

Neonatal tetanus - About 800,000 newborns die of this infectious disease every year.

Polio - Virtually nonexistent in Canada, this crippling disease is the major cause of lameness in developing countries. One in 200 cases is paralytic polio, the disease that cripples 5000 children every week.

Tuberculosis - Every year TB afflicts about 2 million children under the age of five, and 50 percent of those whose brains are affected will die.

According to the United Nations' World Health Organization, the source for the above statistics, the six deadly diseases mentioned above kill, every year, 3.5 million children. They leave another 3.5 million disabled for life.

Numbers, however, are only part of the story. In a poor devel-

oping country, the chances are that the average mother will endure the tragedy of seeing one of her children die and another child blinded, crippled or otherwise disabled for life.



OR news

Health-care workers urged to use 'Hot-line' to report medical device failures

The Health Protection Branch, Health and Welfare Canada, is asking all health care professionals to report any adverse incidents associated with medical devices.

To facilitate the reporting of device failures, malfunctions and other related concerns, the Health Protection Branch's Bureau of Radiation and Medical Devices has available a 24-hour, toll-free "HOT-LINE."

Staff will be available to answer calls during office hours, 08:30 to 16:30 eastern time zone from Monday to Friday. Outside these hours, an answering machine will record messages, with a call back the next working day.

The purpose of this "HOT-LINE" is to obtain information concerning faulty and unsafe devices so that the Bureau can take, if warranted, preventative measures to reduce device related incidents. The extent of the subsequent investigation will depend on the severity of the hazard, with the information gathered made available to the manufacturer.

A "medical device" is any article, instrument or apparatus which is sold or presented for use in diagnosis, treatment, or prevention of disease or abnormal physical state, or for correcting human body functions. Pacemakers and syringes are medical devices, as are contact lenses, vaporizers and heating pads. The 24-hour, "HOT-LINE" number: 1-800-267-9675.

Over 120 health-care workers exposed to AIDS in Canada in past two years

Since surveillance began two years ago (September, 1985), at least 120 health-care workers in Canada have been exposed to the AIDS virus. Fortunately, none have become infected.

Although the finding is reassuring, as many as 25% of the injuries could have been avoided if the health-care worker had taken standard infection control precautions, according to Kim Elmslie, co-ordinator of the national surveillance program at the Federal Centre for AIDS in Ottawa. Elmslie also mentioned that the study did not capture all the exposures that have occurred in the 210 hospitals that were reporting.

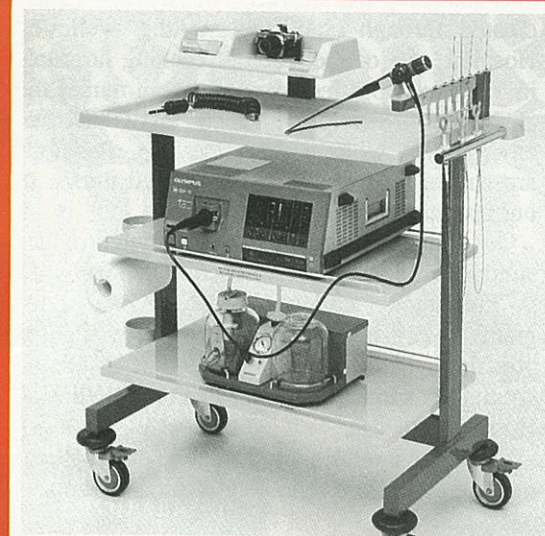
Of the 120 health-care workers reporting exposure to the human immunodeficiency (HIV) virus, the majority were nurses, although respiratory therapists, medical students, physicians and lab technicians were involved.

The group includes 94 who had parenteral or mucous membrane exposure, and another 26 who had intact skin splashed with an infected body fluid. All those in the group have been followed up with periodic serum testing. Follow-up continues for 12 months after exposure as it can take up to six months for detectable HIV antibodies to develop.

The Ottawa centre estimates that 25% could have been prevented if infection control guidelines had been followed.

Some of the preventable exposures occurred when workers, mostly nurses, recapped needles, incorrectly disposed of used needles, failed to cover an open wound which then became contaminated with a patient's blood, or failed to wear goggles or removed them too soon when a blood splash could have been expected.

CARSON KeyMed Bronchoscopy Support Group



Procedure Cart

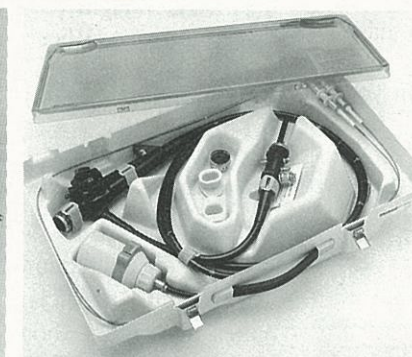
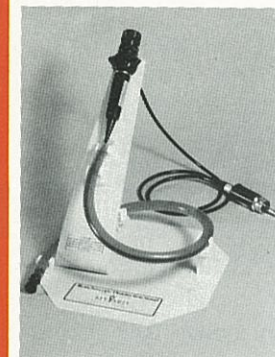
Keymed's lightweight Endoscopic procedure cart is designed to hold all the instrumentation required for bronchoscopy, featuring:

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- Upper tray for camera, syringes or small items.
- Easy grip steering handle and highly maneuverable anti-static casters with brakes.

ETO Sterilization Tray

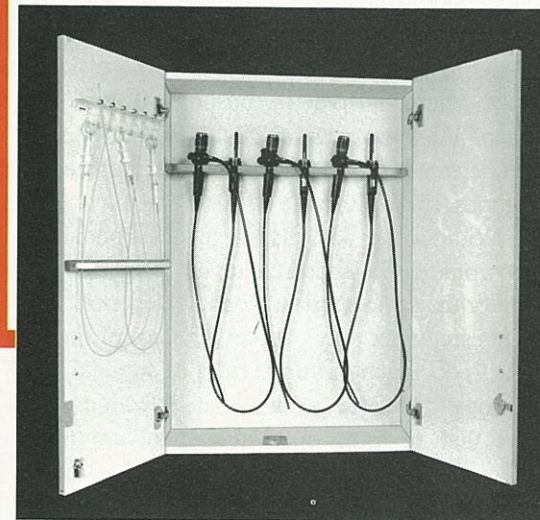
The ETO Sterilization tray provides a safe and durable container for a fiberscope and all its accessories during gas sterilization.

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Sudbury General Hospital
700 Paris Street
Sudbury, Ontario
P3E 3B5**

Study shows that infection control teams underestimate post-op infection rate

Researchers using a post-discharge questionnaire instead of only an in-hospital post-op questionnaire have noted a higher percentage of wound infections being reported.

Between March and May, 1985 a total of 1,644 surgical procedures were analyzed at Baystate Medical Centre in Springfield, Mass. Surgical wound infections noted before and after discharge were documented. Physician and discharged patient questionnaires were used to assess the incidence of wound infections.

Approximately 30 days after discharge, patients were sent a questionnaire that inquired about their



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Wellesley Hospital
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surgical wounds and whether any had sought additional medical attention for wound-related problems. The patients' physicians were also sent questionnaires that asked about infections they had documented after hospital discharge.

From the 1,644 wounds analyzed, 108 were infected. Of those, 50 occurred after the patient had been discharged from the hospital. Post-discharge rates of infection were 5.2%, 7.5% and 7.5% for clean, clean-contaminated, and contaminated-dirty categories, respectively.

Without the post-discharge questionnaire, the rates would have appeared to be 2.5%, 6.5% and 6.8% for the same surgical wound categories.

This study not only supports the use of questionnaires to document accurate rates of surgical wound infections, but also shows that infection control teams that perform only in-hospital wound surveillance probably underestimate the true infection rates, the researchers concluded.

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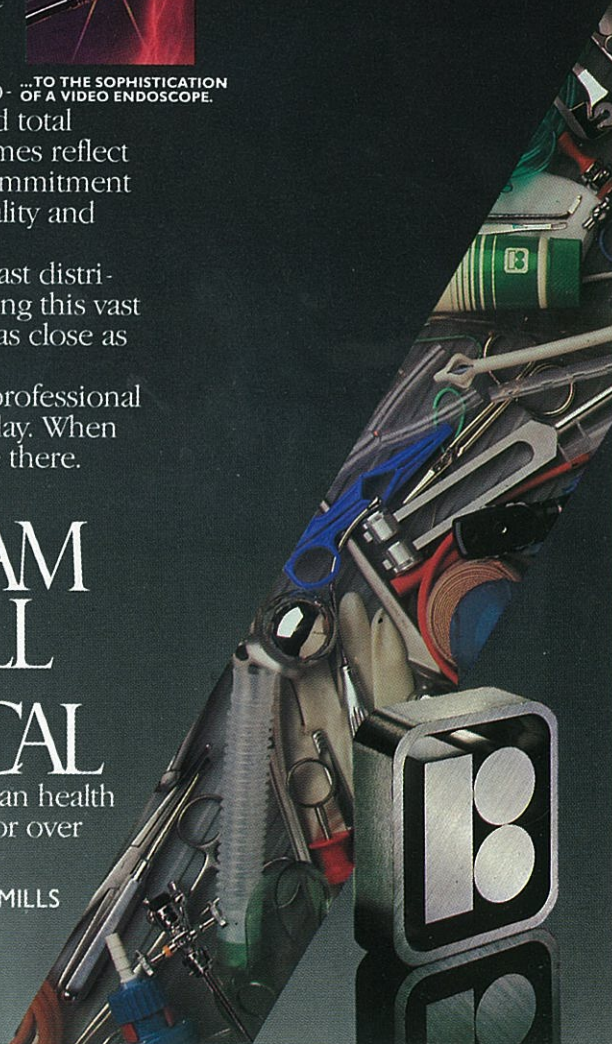
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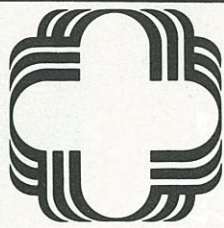
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Shortage of general surgeons could hit crisis proportions in next five years

The Canadian public will not be getting proper surgical care if the projected shortage of general surgeons turns out to be correct, says the Canadian Association of General Surgeons.

Meeting in Winnipeg recently, Dr. John Hinchey of Montreal, president of the Association told a press conference at the annual meetings of the Association and of the Royal College of Physicians and Surgeons of Canada that university specialty training programs must open more spots for general surgery trainees.

The large number of retirements in the next few years combined with inadequate numbers of new physicians entering the specialty will lead to the shortage, says Dr. Frank Turner of Kelowna, B.C., chairman of the association's manpower committee. He says there presently exists an immediate need for 60 general surgeons across the country.

Dr. Hinchey said that what will happen is we'll have a crisis five to ten years down the road. Figures compiled by the College and the Canadian Medical Association show that there are now 1,721

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For further information, contact: BCIT Health Part-time Studies, 3700 Willingdon Avenue, Burnaby, B.C. V5G 3H2, (604) 432-8376, toll free 1-800-663-6542.

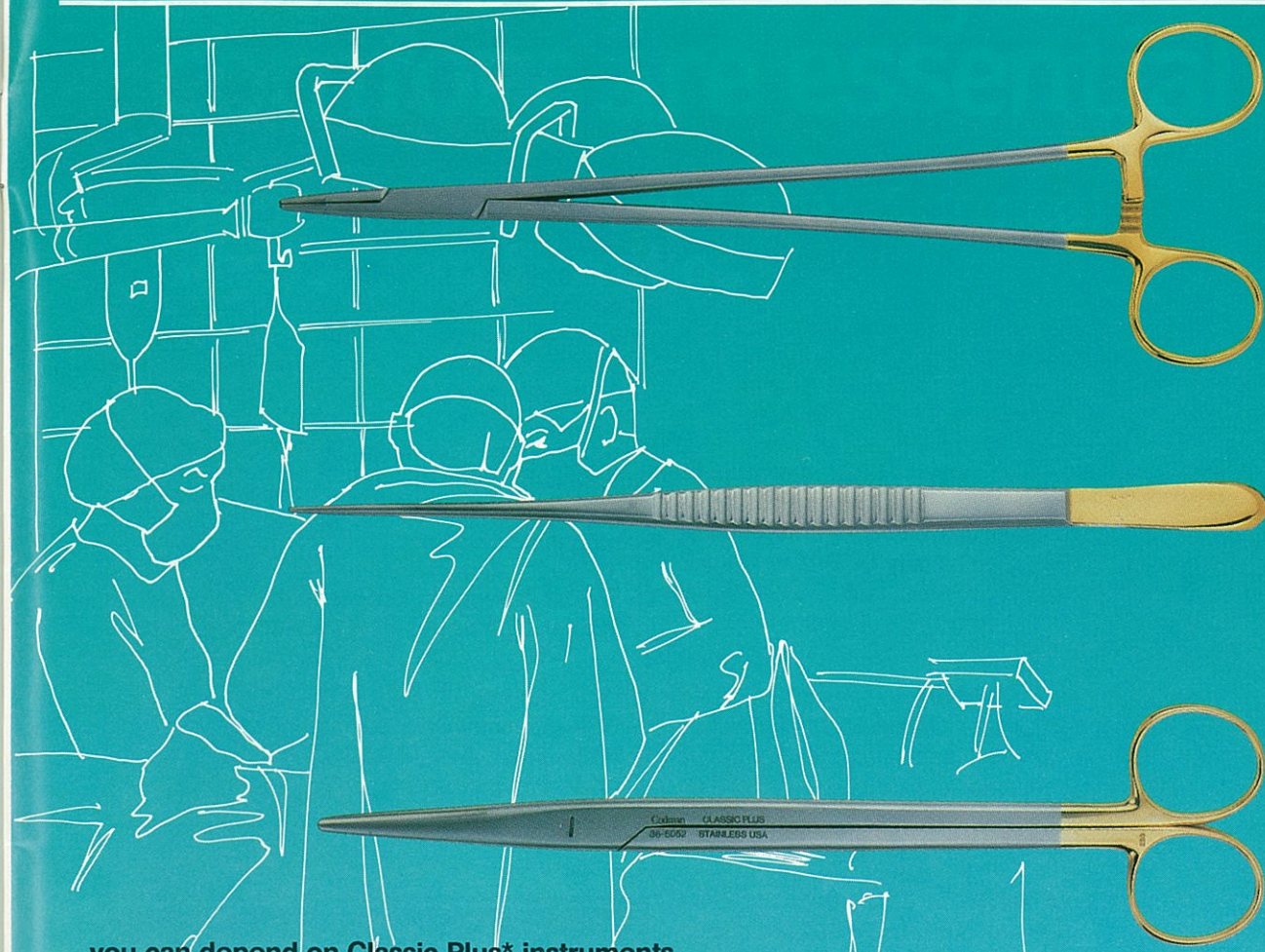
practising general surgeons in Canada, or one general surgeon for 13,600 people, "a fairly reasonable ratio," he said.

"But when we look at the age of general surgeons in Canada, we find that it is weighted heavily to the over-50 age group. Across the country, we have evidence that between 20%-30% of the existing stock of general surgeons will retire in the next few years," Dr. Turner pointed out.

The solution, he said, is to recognize that we have the problem and provide more training positions. He pointed out that across Canada there has been a reduction in training posts in the general surgery programs at all 16 Canadian medical schools. "We have the candidates applying, but we can't fund them," he said.

It was mentioned that many doctors who enter general surgery programs decide later to continue into sub-specialties such as plastic surgery. Also, the general surgeon has the lowest income of any of the surgical specialties; plus, the long hours and working conditions of general surgery cause trainees concerned with quality of life to look elsewhere. ■

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Calendar of Events...

October 18-21, Red Deer, Alberta: Operating Room Nurses Association of Alberta Annual Conference, Capri Centre. (Contact Jackie Waismann, Conference Chairperson, 130 Welton Crescent, Red Deer, Alberta T4N 6B3 [403] 347-6420).

October 23-24, Sault Ste. Marie, Ontario: Northern Ontario Operating Room Nurses Association's 13th Annual Conference. (Contact Ann Marie McPhee, Operating Room, Plummer Memorial Hospital, 969 Queen St. E., Sault Ste. Marie, Ontario P6A 2C4).

November 1-3, Vancouver, B.C.: International AIDS Conference, Holiday Inn Harbourside. Sponsored by the Division of Continuing Education in the Health Sciences, University of British Columbia. (Contact AIDS Symposium, 105 - 2194 Health Sciences Mall, University of British Columbia, Vancouver, B.C. V6T 1W5).

November 6-7, Haliburton, Ontario: 10th Anniversary Conference, Operating Room Nurses Association of South Central Ontario, Pinestone Inn, Haliburton, Ontario. (Contact Carol Findlay, c/o Ross Memorial Hospital, 10 Angeline St., Lindsay, Ontario K9V 4M8 [705] 324-6111).

November 13-14, Hamilton & District: The Third Regional Conference, Operating Room Nurses Association of Hamilton & District, Prudhommes Inn, Vineland Station & Queen Elizabeth Way. (Contact Brenda Flaherty, Henderson General Hospital, 711 Concession St., Hamilton, Ontario L8V 1C3 (416) 389-4411, Ext. 3639).

December 7, Toronto, Ontario: 3rd Annual Course, "Sepsis in Surgery," Mount Sinai Hospital, Toronto. (For information, contact Continuing Education, Faculty of Medicine, University of Toronto, Medical Sciences Building, Toronto, Ontario M5S 1A6 (416) 978-2718).

February 26-28, 1988, Windsor, Ontario: 3rd Annual Conference, Windsor and District Operating Room Nurses Association. (Contact Irene Nikita, 1409 Victoria Ave., Windsor, Ontario N8X 1P2).

March 6-11, 1988, Dallas, Texas: 35th Annual AORN Congress. (Contact Association of Operating Room Nurses, 10170 East Mississippi Ave., Denver, Colo. 80231 U.S.A.).

March 30, 1988, Hamilton, Ontario: Day in Orthopaedics, Hamilton Convention Centre (Contact The Programme in Continuing Medical Education, McMaster University, Rm. IM6, H.S.C., 1200 Main Street West., Hamilton, Ont. L8N 3Z5 (416) 529-9140, Ext. 2219).

April 13, 1988, Hamilton, Ontario: Surgery in the Elderly, Hamilton Convention Centre. (Contact McMaster University Programme in Continuing Medical Education, 416- 529-9140 Ext. 2219)

May 30-June 3, 1988, Vancouver, British Columbia: National Conference, Operating Room Nurses Association of Canada (ORNAC), B.C. Convention Centre and Pan Pacific Hotel. (Contact, for delegates, Mary Raikers-Tindle, 5199 Turquoise Dr., Richmond, B.C. V7C 4Z6. For delegates, Jean Kerr, Exhibitors Committee, 1105-2050 Nelson St., Vancouver, B.C. V6G 1N6).

Future National Conferences... Operating Room Nurses Assoc. of Canada

- 1988 - Vancouver, B.C., May 30-June 3
- 1990 - Toronto, Ontario, April
- 1991 - Banff, Alberta, May 12-15
- 1993 - Province of Quebec

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- Van Nes Rotationplasty - A Psychological Perspective
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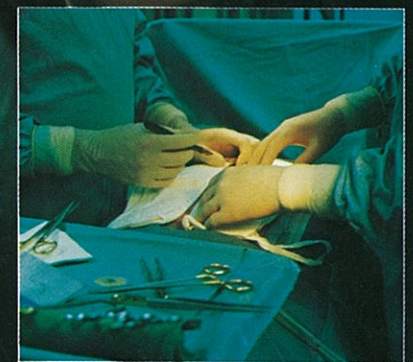
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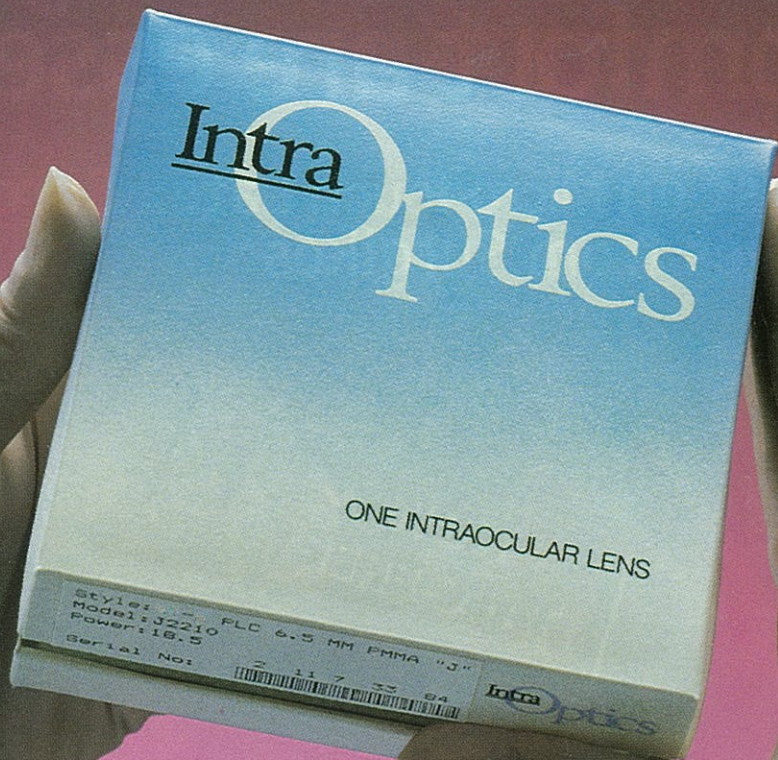


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