

## For Vulvar Contusions, Cold Packs Often Suffice

BY NANCY WALSH  
New York Bureau

NEW YORK — A vulvar injury in a child is likely to heal without major intervention, even if a large hematoma is present and the patient complains of severe pain, David Muram, M.D., said at a gynecology conference sponsored by Mount Sinai School of Medicine.

Typical vulvar injuries are accidental deceleration injuries, occurring when the child falls on the crossbar of a bicycle or while climbing fences or playground equipment. The vagina, urethra, and hymen are usually spared because of the protection provided by the overlying labia, Dr. Muram said.

If there is no evidence of hymeneal injury—which is unlikely to result from an accident—the main concern is ensuring the child can void. If not, she should be kept for observation, and a suprapubic catheter should be placed, he said.

It's also a good idea to check whether there is a fracture of the pubic bone. "Tell her to stand up and raise one foot at a time. If this causes pain, get an x-ray. Not that you

are going to do anything about it, but you won't be sued for missing it," said Dr. Muram of the department of obstetrics and gynecology at the University of Tennessee, Memphis, and consultant to Eli Lilly & Co., Indianapolis.

In most cases, contusion of the vulva does not require special treatment, other than cold packs. Drainage is required only if bleeding persists and there is a large hematoma that continues to grow. Any clotted blood should be removed and the bleeding points identified and ligated, he said.

If the source of the bleeding in a large hematoma cannot be identified, pack the cavity with gauze and apply a firm pressure dressing. The pack can be removed the next day, but watch for possible renewed bleeding, he said.

It's also wise to prescribe a broad-spectrum antibiotic prophylactically, particularly if the hematoma is incised.

"Sitz baths are wonderful in this situation, and make sure the child lies on an air-filled doughnut to prevent pressure necrosis of the external genitalia," he said. ■

## One Expert's Opinion: Burch Colposuspension Still Has Its Place

BY SHARON WORCESTER  
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FORT LAUDERDALE, FLA. — Burch colposuspension isn't the newest or fanciest of the ever-expanding surgical options for treating urinary stress incontinence, but it does have a solid place in the surgical armamentarium for this condition, Matthew Barber, M.D., said at a symposium on pelvic floor disorders sponsored by the Cleveland Clinic Florida.

"In my opinion, Burch colposuspension is the standard by which all other surgeries for genuine stress incontinence should be compared," said Dr. Barber of the Cleveland Clinic.

Numerous studies over the past decade have upheld the efficacy and safety of this procedure, he noted.

Systematic reviews of the literature in 1996 and 1997, for example, showed that colposuspension is more effective and long lasting than anterior repair or needle suspensions, and is as effective as sling procedures. And a 2001 study of 124 patients with 10- to 15-year follow-up showed a 94% long-term cure rate.

When compared with the traditional bladder neck sling and the use of tension free vaginal tape (TVT), the Burch procedure also compared favorably. In four randomized controlled trials, there was no difference in efficacy between the bladder neck sling and the Burch procedure, although in observational studies, a slightly higher rate of voiding dys-

function was seen with the Burch procedure.

In the largest randomized trial comparing open Burch with TVT, there were no differences in cure rates among 344 patients. Bladder injury was more common with TVT, but voiding and recovery times were longer with Burch, Dr. Barber said.

Disadvantages of the open Burch procedure are the abdominal incision, and—according to at least one study—lower efficacy in patients with intrinsic sphincter deficiency, he said.

The procedure also can be performed laparoscopically, but short-term data suggest this approach is less effective. The outcomes are likely skill dependent, but long-term comparisons are not yet available.

And compared with TVT, the laparoscopic Burch procedure appears to take longer and may not be as effective, at least one study suggests.

Still, the procedure is useful, Dr. Barber said. "It works, and you shouldn't be ashamed of it," he added.

The Burch procedure is particularly useful when combined with other laparoscopic or open repairs such as bilateral tubal ligation, hysterectomy, and sacral colpopexy, as well as in younger women who wish to maintain fertility, in women with a history of mesh complications or allergies, and in women who wish to avoid foreign materials, Dr. Barber said. ■

## Aerosolized Microbes May Pose Contamination Hazard in OR

BY JEFF EVANS  
Senior Writer

TUCSON, ARIZ. — Nasopharyngeal shedding of aerosolized microbes may be a vector for perioperative contamination in the operating room, Charles E. Edmiston Jr., Ph.D., reported at the annual meeting of the Central Surgical Association.

Barriers to contamination, such as surgical masks, may not adequately contain microbial aerosols, especially when they are worn for long durations, added Dr. Edmiston of the Medical College of Wisconsin, Milwaukee.

"Ten to fifteen years ago we would have never talked about this, because you primarily looked upon infections that occurred during the perioperative or even postoperative period as being mediated merely by contact," he said.

Over an 18-month period, Dr. Edmiston and his collaborators matched cultures obtained from air in the operating room with nasal cultures taken from an 11-member vascular surgery team during 70 vascular reconstruction procedures. An air-sampling device used a 0.45- $\mu$ m filter to collect the air at four points located within 0.5-1 m or 4-5.5 m from the surgical wound.

The investigators recovered strains of coagulase-negative staphylococci, such as

*Staphylococcus aureus*, during 60 (86%) of the 70 procedures; these strains were collected 0.5-1 m away from the wound in 36 of the procedures. Another third of the isolates were *S. epidermis*.

Gram-negative bacteria grew in cultures after the perioperative sampling period in 23 (33%) of the 70 procedures. Three of the isolates—*Stenotrophomonas maltophilia*, *Burkholderia cepacia*, and *Aeromonas* species—entered the operating room as an

aerosol when surgical team members turned on the faucet of a utility sink. Most of the recovered strains showed patterns of resistance to multiple drug groups, such as the aminoglycosides,  $\beta$ -lactams, and fluoroquinolones.

In several selected cultures, Dr. Edmiston and his colleagues used pulsed-field gel electrophoresis, a tool commonly employed by molecular epidemiologists to investigate infectious disease outbreaks. They discovered that isolates derived from air samples were often from the same clonal family of isolates obtained from the nasal cultures of the surgical team.

In one instance, Dr. Edmiston found that *S. aureus* isolates taken from a senior member of the surgical team matched those from air samples taken within 1 m of the wound during an operation in

which the senior member was present.

In three separate procedures, the investigators found that a vascular fellow had spread the same strain of *S. aureus* from his anterior nostril to within 1 m of a wound.

"It became obvious that the shedding phenomenon was occurring during the intraoperative period," Dr. Edmiston said.

Although none of the 70 patients developed surgical-site or prosthetic-device infections after their procedures, the microbes recovered from the operating room air and nasal cultures are the same kinds commonly implicated in such infections, which can occur even months to years after the surgery, Dr. Edmiston said.

Four other reports in the literature have used molecular techniques to link the operative team with postoperative surgical-site infections, he noted.

To determine the effect of standard tie-back surgical masks on nasopharyngeal shedding, the researchers measured the air at four points in a room with conditions identical to those in an operating room. Twenty-two healthy volunteers and eight volunteers with rhinorrhea sat in the room for 90 or 180 minutes and alternately read out loud or silently for 15 minutes at a time with or without the masks on.

At 90 minutes, the masks significantly reduced the amount of microbial nasopharyngeal shedding in healthy volunteers from 12.5 colony-forming units per cubic meter in those who did not wear a mask to 5.6 cfu/m<sup>3</sup> in those who did wear one. In the volunteers with rhinorrhea,

shedding declined significantly from 24.3 cfu/m<sup>3</sup> in those without masks to 11.3 cfu/m<sup>3</sup> in individuals who wore masks.

Masks were ineffective at significantly reducing the amount of nasopharyngeal shedding at 180 minutes. In healthy volunteers, nonmasked individuals had more shedding (21.8 cfu/m<sup>3</sup>) than did masked individuals (12.3 cfu/m<sup>3</sup>), but the difference was not significant. No difference in microbial shedding occurred in volunteers with rhinorrhea according to whether they wore a mask (37.8 cfu/m<sup>3</sup>) or not (53.8 cfu/m<sup>3</sup>).

"In essence, what's occurring is you have this venting phenomenon over the top of the mask and around the sides of the mask," Dr. Edmiston explained.

Dr. Edmiston may only have proved that the airflow system in operating rooms works, since no patient became infected, noted Mark Malangoni, M.D., who was designated to comment on the paper. Airflow comes into the operating room over the patient, pushing air away from him or her to the sides of the room and toward the floor where return air systems exist. Dr. Malangoni, outgoing president of the association, added that he would have been more convinced if Dr. Edmiston had a way to sample the air directly over the patient.

Dr. Edmiston contended, however, that the movement of seven to eight people in the operating room—maybe five or six of whom are within a half meter of the surgical wound—creates a vortexing of aerosols that may spread out across the room despite specialized airflow. ■



**Barriers to contamination may not adequately contain microbial aerosols.**

**DR. EDMISTON**