

## Pediatric Vaginal Discharge and Vulvar Irritation

Vaginal discharge and/or vulvar irritation represent the most common gynecologic concerns in the pediatric population. They account for approximately 50% of all pediatric gynecologic visits. Vaginal discharge may suggest infection or, more commonly, will be indicative of another process. The thin, unestrogenized prepubertal vagina is at increased risk of bacterial infection due to several factors. These include the absence of protective labial fat pads, proximity to the anus, absence of pubic hair, and neutral to alkaline vaginal pH. These factors, combined with the inadequate hygiene practices common to children, increase the bacterial count at the vaginal opening and thus lead to bacterial infections in the vagina. Prepubertal girls rarely develop vaginal yeast infections because the unestrogenized vagina will not support the growth of yeast. Exceptions to this are girls who have diseases affecting their immune systems.

In addition to bacterial vaginal infections, other causes for vaginal discharge in the younger girls include foreign bodies, urine trapping, sexually transmitted diseases, etc. The most common foreign body is toilet paper. This sticks to the labia after wiping and with time can roll up into the vagina. Eventually, an odorous discharge becomes evident. Other foreign bodies can be found in the vagina but these are usually placed there by the child herself or someone else. Most young ladies sit on the toilet with their knees together. During urination, some urine may flow back into the vagina. This eventually dribbles out on the panties and may be presumed to be a discharge. This can also cause vulvar irritation. This can be easily corrected by having the child urinate with her knees apart, sit for a moment before jumping up, and wiping from behind. In the older prepubertal female, the most common cause of discharge is physiologic leucorrhea. This signifies the beginning of ovarian function. This is often the case starting at about seven or eight years of age. The discharge is white and odorless although it may appear yellow after it has dried on the panties. In these situations, the only necessary treatment is reassurance and occasional sitz baths. Irritants such as deodorant toilet paper, panty liners, etc. should be avoided as these may increase the discharge.

In some cases, vulvar irritation (redness, rash, soreness) may not represent true infection but can cause a reaction to vaginal discharge. However, there are many primary processes that will cause vulvar irritation. Primary vulvar irritation can result from yeast (similar to diaper rash), some skin disorders, masturbatory activity, sexually transmitted diseases, environmental irritants, hygiene practices, and other nonspecific causes. Prepubertal girls frequently experience vulvar discomfort due to the lack of estrogen and hair to protect this delicate area. Removing irritants, soaking in the tub, and applying A&D ointment will soothe the symptoms until estrogen production begins and they outgrow this problem.

### Symptoms and History

Symptoms of vaginitis and vulvitis may overlap or present very distinctly. They include green or brown discharge, pain or burning with urination, vulvar itching, redness, rash, odor, bleeding, etc. The history is most important to begin to determine whether the problem is physiologic (normal) or indicative of a disease process. Details include:

- Quantity of discharge
- Duration
- Color
- Hygiene techniques
- Medications
- Infections in other family members
- Use of hygiene products
- Bedwetting
- Other skin conditions
- Sexual abuse
- Masturbation
- Types of clothing
- Excessive genital washing
- Urination habits
- Sleeping habits

### Work-up for Vulvovaginitis

The work-up begins with a thorough history and general physical examination. An examination of the vulva (external part) is a very important part of the process and is always carried out in a sensitive, non-threatening manner. The young lady can assist in her exam regardless of age. This time also presents an opportunity for teaching about vulvar and vaginal anatomy. A vaginal culture is sometimes indicated but is carried out in a very different manner than for adult women. Foreign bodies can frequently be removed in the office. On occasion, the symptoms may call for inspection of the vagina. This is accomplished in the office, but also in a manner which is very different from the speculum exam of an adult woman.

### Treatment

Treatment is directed at the cause once a thorough work-up has been completed. It may include changes in hygiene practices, medications, comfort care, etc. Education is also an integral part of process.

### Conclusion

Vaginal discharge (vaginitis) and vulvitis can be caused by many different factors. Therefore, in children, self-treatment is not advised. A thorough evaluation will expedite the diagnosis and proper treatment of the situation and avoid multiple treatments and the possibility of causing further irritation and infection.