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Case Report



# Genital Pain in a Preschool-aged Girl: The Critical Role of Imaging

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## Introduction

Vaginal foreign bodies represent a clinical and diagnostic challenge in pediatric care. The most common etiology is self-insertion during exploration or play, with toilet paper, small hard objects, and pieces of cloth being the items most frequently identified [1,2]. Less commonly, vaginal foreign bodies may be associated with sexual abuse, which should be systematically considered and appropriately evaluated in all cases [2].

**Keywords:** Sexual abuse; Pelvic pain; Vaginal foreign body

## Case Report

A 3-year-old previously healthy girl presented to the pediatric emergency department with a 24-hour history of green vaginal discharge associated with progressive perineal pain and local discomfort. There were no reported fever, dysuria, abdominal pain, or gastrointestinal symptoms. According to the mother, the child had recently spent an overnight stay at a relatives' home without direct parental supervision. On physical examination, the patient afebrile and hemodynamically stable. Local inspection revealed marked edema, erythema, and tenderness of the right labium majus, associated with purulent greenish vaginal discharge. No external signs of trauma or bleeding were observed. Given the patient's age and clinical presentation, a multidisciplinary approach was promptly initiated, involving Pediatric Gynecology and Forensic Medicine.

Laboratory evaluation with complete blood count and inflammatory markers, were within normal limits, as were screening tests for sexually transmitted infections. A pelvic radiograph was subsequently obtained, revealing a radiopaque cylindrical structure within the vaginal canal, consistent with a vaginal foreign body (Figure 1).

**Figure 1:** Radiographic evaluation of the pelvis in a young child presenting with persistent vaginal discharge. The image shows a well-defined, cylindrical radiopaque object in the midline, consistent with a vaginal foreign body.

The patient was taken to the operating room for vaginoscopy under general anesthesia. Prior to any intervention, a forensic evaluation was conducted. Vaginal exploration identified an alkaline battery lodged within the vaginal cavity, causing circumferential mucosal necrosis and chemical injury to the surrounding tissues. The battery was carefully removed, followed by copious irrigation of the vaginal canal with saline solution. No vaginal perforation or deeper tissue involvement was identified.

Postoperatively, the patient recovered uneventfully. Following forensic assessment, the episode was subsequently classified as probably accidental. The patient was discharged with topical local therapy and scheduled outpatient follow-up in General Pediatrics and Pediatric Gynecology. At the three-month follow-up visit, the child was asymptomatic, with complete resolution of vaginal discharge and pain. Gynecological examination demonstrated normal healing, with no residual mucosal lesions, scarring, or functional complications.

## Discussion

Vaginal foreign bodies represent a significant, albeit infrequent, clinical challenge in pediatric gynecology.1 These objects, often introduced unintentionally, may lead to a spectrum of frequently nonspecific symptoms, including vaginal discharge, bleeding, local pain, erythema, or edema [1-4]. In young children, clinical history is often limited, and physical examination may be inconclusive or poorly tolerated, frequently resulting in diagnostic delay and underscoring the importance of adjunctive diagnostic tools5. Alkaline batteries represent a particularly hazardous type of vaginal foreign body. Tissue injury occurs rapidly; therefore, prompt diagnosis and urgent removal are essential to prevent complications such as vaginal stenosis, fistula formation, or long-term reproductive sequelae [1,2,5,6].

The diagnostic approach begins with a careful history-taking and physical examination, with particular attention to the possibility of sexual abuse and associated medicolegal implications [2,7]. Imaging plays a pivotal role in the diagnostic workup when a vaginal foreign body is suspected, with ultrasonography as the preferred initial modality [2,7,8]. Plain pelvic radiography is a fast and widely available imaging modality that may aid in the detection of radiopaque objects, such as batteries, allowing prompt diagnosis, as demonstrated in our case, and facilitating timely surgical intervention and coordinated multidisciplinary management [2,7].

Vaginoscopy under anesthesia is the gold standard for both diagnosis and removal, allowing direct visualization of the foreign body and assessment of mucosal injury (burns, necrosis, or perforation) [2,9]. When the foreign body is a battery, thorough vaginal irrigation is recommended to remove residual alkaline material. In the presence of mucosal injury, topical estrogen may be considered to promote healing, and antibiotics may be indicated when there is evidence of infection or significant tissue damage [6,10].

Postoperative follow-up is essential to monitor for late complications [6].

## Conclusion

This case highlights the critical role of imaging in the evaluation of genital pain and abnormal vaginal discharge in prepubertal girls. Plain pelvic radiography enabled rapid and accurate diagnosis of vaginal foreign body, directly influencing clinical management and preventing potentially severe complications. Clinicians should maintain a high index of suspicion for vaginal foreign bodies in young children with unexplained genital symptoms, and early imaging should be considered an integral part of the diagnostic approach. Prompt recognition and multidisciplinary management are essential to optimize outcomes and ensure patient safety.

## Consent

Informed consent was obtained from the parent.

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## Disclosure

The authors declare no conflict of interest.

## Author Contributions

all authors contributed equally to the conception, drafting, and revision of the manuscript and approved the final version.

## Conflicts of Interests

The authors declare no conflicts of interest.

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