Syntax Literate: Jurnal Ilmiah Indonesia p–ISSN: 2541-0849 e-ISSN: 2548-1398
Vol. 8, No. 11, November 2023

VULVOVAGINAL LACERATION AND PELVIC FRACTURE WITH SYMPHISIOLYSIS

Karina Surakusuma, Yulia Margaretha
Faculty of Medicine, Andalas University Padang
Email: karinasurakusuma@yahoo.com

Abstract

Vulvovaginal laceration and pelvic fracture with symphysis disruption represent a complex and challenging clinical scenario in the field of obstetrics and gynecology. This study aims to examine the incidence, clinical characteristics, and management strategies for cases involving simultaneous vulvovaginal lacerations and pelvic fractures with symphysis disruption. A retrospective analysis was conducted on a cohort of patients presenting with these combined injuries over a specified period. Demographic data, obstetric history, mode of delivery, associated risk factors, clinical presentation, radiological findings, and management outcomes were systematically reviewed. Results revealed that the occurrence of vulvovaginal laceration and pelvic fracture with symphysis disruption is relatively rare but can lead to significant morbidity. The majority of cases were associated with traumatic childbirth, instrumental deliveries, or pelvic trauma. Prompt diagnosis through a multidisciplinary approach involving obstetricians, orthopedic surgeons, and radiologists is crucial for optimizing patient outcomes. In conclusion, vulvovaginal laceration and pelvic fracture with symphysis disruption present a complex clinical scenario that requires a comprehensive and multidisciplinary approach. Further research and collaborative efforts are warranted to enhance our understanding of risk factors, refine diagnostic protocols, and establish evidence-based guidelines for optimal management of this unique obstetric and gynecologic challenge.

Keywords: *Pelvic Fracture; Symphysis Disruption; Vulvovaginal Laceration*

Introduction

Genital trauma may result in external injuries to the labia, vulva or vagina, urethra and anus and internal injuries to the bony pelvis, bladder, bowels and another reproductive organs (Tullington & Blecker, 2020). Based on epidemiology, the most common cause of genital trauma in reproductive age women is injury during labor (Albers & Borders, 2007). If genital injuries was not properly managed then chronic discomfort, dyspareunia, infertility, or fistula formation may result (Lopez, Focseneanu, & Merritt, 2018). Genital injuries alone rarely result in death. Clinicians need to be able to recognize the diagnosis, provide initial management, and assure that psychological aspect of the patient's and physical needs are addressed (McCorkle et al., 2011).

How to cite:	Karina Surakusuma, Yulia Margaretha (2023) Vulvovaginal Laceration and Pelvic Fracture with Symphisiolysis, *(8) 11*, https://doi.org/10.36418/syntax-literate.v8i10
E-ISSN:	2548-1398
Published by:	Ridwan Institute

Profuse bleeding can occur owing to the rich vascular supply in the genital area and may require operative intervention. Straddle injuries was defined when the soft tissues of the vulva are compressed between an object of the accident and the bones of the pelvis, the pubic symphysis, and pubic rami. Abrasions, ecchymoses, and lacerations may occur as a result of this trauma; extravasation of blood into the loose areolar tissue in the labia, along the vagina, the mons, or clitoral area may cause formation of hematoma (Patel & Merritt, 2019).

Most of postpartum vulvovaginal lacerations will not cause long term complications, however severe lacerations are associated with a higher incidence of longterm pelvic floor pain, dyspareunia, dysfunction, and embarrassment. Lower urogenital tract trauma cases are challenging as there are psychological factors that contribute to long-term complications (Hall & Brown, 2009). An understanding of anatomy, diagnosis, management and complications is essential for optimal outcomes of genital trauma (Merritt, 2008).

A 19-year-old patient came to the emergency room of M. Djamil Hospital in Padang, sent from Pasar Usang Health Center. The patient had a traffic accident five hours before admission. She was reading motorcycle and hit roadblocker. On physical examination found she was composmentis cooperative with vital sign was stable except the heart rate was increase 115 per minute. She was not able to move the lower extremity.

Pelvic x-ray was performed with the results of unstable pelvic fracture and symphysiolysis (Kuipers, Bos, & Meuffels, 2021). Then she had gynecologic examination in operating theatre in general anasthesi (Merritt, 2009). In inspection and inspeculo found lacerations in the periurethral area sinistra, vaginal lacerations dextra 5 cm proximal to the hymen, lacerations of the labia mayora dextra and sinistra and lacerations of the pubic symphysis area measuring 7 x 8 x 3 cm. Furthermore, perineal and periurethral repair, reconstruction of the labia mayora, and installation of pelvic orifs. Multi department was playing role to managing this patient, there was Urogynecologic, Urology, Surgeon and Orthopedic.

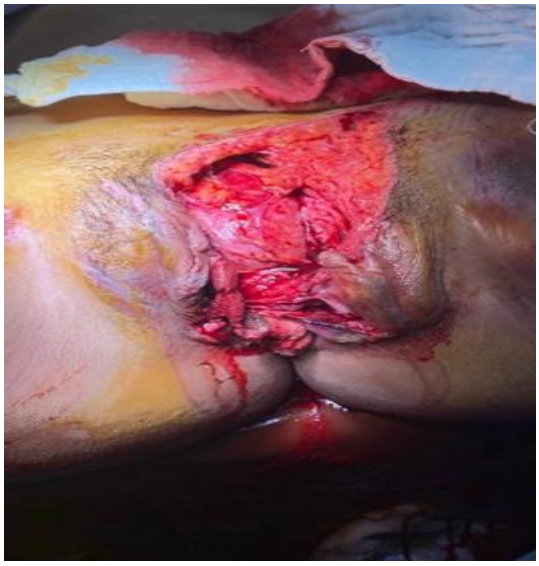

Figure 1 Preoperative vaginal inspection

Figure 2 Preoperative Pelvic X-ray

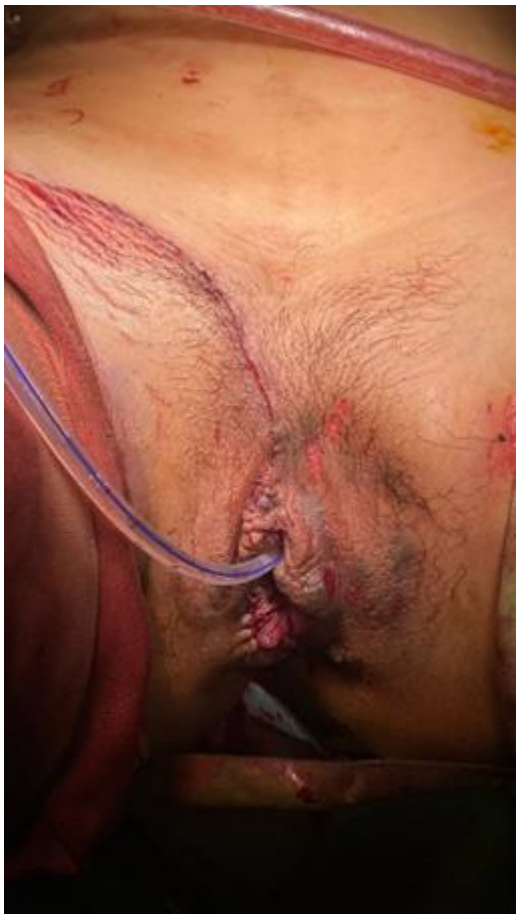

Figure 3 Postoperative inspection

Research Methods

This research uses a quantitative approach that aims to measure data and apply it in statistical analysis in quantitative research there is an emphasis on neutrality and objectivity that relies on the principles of replication, standard procedures, measurement, and data analysis.

Results and Discussion

The approach to the genital trauma follows the traditional assessment of vital signs, airway, breathing, circulation and evaluation of the sites and sources of trauma (Lopez et al., 2018). The severity of the injury and the amount of bleeding determines where and how the examination should best take place. If the injury is not severe, the patient may be examined in an emergency department without sedation (Green, Roback, Kennedy, & Krauss, 2011).

When the patient is unable or unwilling to allow an adequate examination to be accomplished, light conscious sedation for the assessment of genital injuries has been suggested, but may be of limited use. It is the opinion of experts in the field that general anesthesia is often better in cases of genital injury, because it will result in a better examination, assessment and repair

Initial first aid for a vulvar injury or vaginal laceration entails compression of the bleeding. A clean dressing can be held in place over the vulva by compressing the soft tissues against the underlying boney pelvis. Expansion of a hematoma can be prevented by such pressure and minimize the blood loss and injury sustained (Li et al., 2020). The vagina can be packed with sterile gauze packing in the emergency department setting until the patient was operable. Ice packs can be held in position over minor hematomas and lacerations until expertise can be arranged for assessment.

In the patient who has a small-caliber vagina, begin repair of lacerations with the deepest (most distal from the introitus) vaginal injuries first Patel (2019), and end repair with introital lacerations to allow for maximum working space and visualization. Postoperative application of topical estrogen cream to injuries of the mucosal surfaces of the vagina and introitus may decrease formation of granulation tissue and promote healing without stricture (Hollond et al., 2023).

The vulva serves to protect the female sexual organs and is an important part of the female sexual response (Wallen & Lloyd, 2011). The vagina is an elastic and muscular tube that connects the vulva to the cervix (Sacher & Bornstein, 2019). The vagina is responsible for sexual intercourse and childbirth. The vagina borders the bladder anteriorly, and the rectum posteriorly.

In the event of a vulvovaginal laceration, thorough identification of the surrounding organs is required. Physical examinations such as inspeculo and rectal toucher are mandatory to rule out involvement of other organs. Repair and reconstruction of the vulvovagina is performed using absorbable thread with a layer adjustment technique. Diagnosis and management of genital trauma must be adequate because urogenital and reproductive dysfunction (Beyitler & Kavukcu, 2017).

Conclusion

Genital injuries arise when these crush injuries produce pelvic fractures. As a result, sharp spicules of the pelvic bone may penetrate the vagina and lower urinary tract. This occurrence may lead lacerations of the bladder, urethra, or vagina. Shearing forces can lead to lacerations when there is a fall associated with rapid abduction of the lower extremities or from being run over by a slow-moving motor vehicle. Prompt diagnosis and appropriate management of vulvovaginal lacerations and pelvic fractures and symphysiolysis is necessary as urogenital complications can occur early or late.

BIBLIOGRAFI

Albers, Leah L., & Borders, Noelle. (2007). Minimizing genital tract trauma and related pain following spontaneous vaginal birth. *Journal of Midwifery & Women's Health*, *52*(3), 246–253.

Beyitler, İlke, & Kavukcu, Salih. (2017). Clinical presentation, diagnosis and treatment of vulvovaginitis in girls: a current approach and review of the literature. *World Journal of Pediatrics*, *13*, 101–105.

Green, Steven M., Roback, Mark G., Kennedy, Robert M., & Krauss, Baruch. (2011). Clinical practice guideline for emergency department ketamine dissociative sedation: 2011 update. *Annals of Emergency Medicine*, *57*(5), 449–461.

Hall, Susanna, & Brown, David J. G. (2009). Management of female genital trauma. *Trauma*, *11*(2), 133–138.

Hollond, Calder S., Ganti, Amitha, Streich-Tilles, Tara, Debiec, Kate, Galloway, Annie, Inneh, Oyenmwen, & Cizek, Stephanie. (2023). Adolescent and Young Adult Patients with Vaginal Graft-versus-Host Disease and Hematocolpos Managed with Vaginal Stents: A Case Series. *Journal of Pediatric and Adolescent Gynecology*.

Kuipers, Joost H., Bos, P. Koen, & Meuffels, Duncan E. (2021). Facial subcutaneous emphysema due to rectum injury after pelvic fracture. *BMJ Case Reports CP*, *14*(7), e241542.

Li, Qi, Warren, Andrew D., Qureshi, Adnan I., Morotti, Andrea, Falcone, Guido J., Sheth, Kevin N., Shoamanesh, Ashkan, Dowlatshahi, Dar, Viswanathan, Anand, & Goldstein, Joshua N. (2020). Ultra-early blood pressure reduction attenuates hematoma growth and improves outcome in intracerebral hemorrhage. *Annals of Neurology*, *88*(2), 388–395.

Lopez, Heather N., Focseneanu, Mariel A., & Merritt, Diane F. (2018). Genital injuries acute evaluation and management. *Best Practice & Research Clinical Obstetrics & Gynaecology*, *48*, 28–39.

McCorkle, Ruth, Ercolano, Elizabeth, Lazenby, Mark, Schulman-Green, Dena, Schilling, Lynne S., Lorig, Kate, & Wagner, Edward H. (2011). Self-management: Enabling and empowering patients living with cancer as a chronic illness. *CA: A Cancer Journal for Clinicians*, *61*(1), 50–62.

Merritt, Diane F. (2008). Genital trauma in children and adolescents. *Clinical Obstetrics and Gynecology*, *51*(2), 237–248.

Merritt, Diane F. (2009). Genital trauma in the pediatric and adolescent female. *Obstetrics and Gynecology Clinics of North America*, *36*(1), 85–98.

Patel, Bindu N., & Merritt, Diane F. (2019). Genital injuries in children and adolescents. *Sanfilippo's Textbook of Pediatric and Adolescent Gynecology*, 99–104.

Sacher, Bina Cohen, & Bornstein, J. (2019). *The normal vulva and vagina*. Springer International Publishing AG Cham.

Tullington, Jessica E., & Blecker, Nathan. (2020). *Lower genitourinary trauma*.

Wallen, Kim, & Lloyd, Elisabeth A. (2011). Female sexual arousal: Genital anatomy and orgasm in intercourse. *Hormones and Behavior*, *59*(5), 780–792.