

Bull Gore Injury of the Vagina

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ABSTRACT

Although an obstetrically related trauma is the most common cause of the injuries to the female genital tract, non-obstetric causes also lead to a significant number of vaginal and vulval injuries. We present 2 cases of vaginal injury, due to bull goring, one of which was associated with massive vulval haematoma. The 2 cases present-

ed in a span of 2 months, in a rural medical college in South India. Both of them were managed surgically, following an initial haemodynamic resuscitation. They also required blood transfusions and an antibiotic prophylaxis. The postoperative period was uneventful.

Key Words: Vaginal injury, Vulval haematoma, Bull gore injury, Non-obstetric trauma

INTRODUCTION

A non-obstetric trauma to the genital tract may be due to various reasons, like vigorous sexual intercourse, falling astride, snowboarding, bull goring, etc. In a country like India, where 80% of the population resides in rural places and are engaged in agriculture and animal husbandry, injuries which are caused by animals are very common, such as goring by cattle. The cattle goring may also occur during festivities like the Muttu Pongal in Southern India, or the Pamplona bull festival in Spain. Although the injuries which are caused by cattle goring are common, a vaginal tear which is caused by bull goring is relatively uncommon and it has been less reported. The severity of the injury may range from a small vulval haematoma to severe vaginal lacerations, leading to a haemodynamic compromise. Accordingly, the management may vary from a conservative treatment of the small haematomas to an aggressive resuscitation and a prompt surgical treatment in case of the severe injuries.

CASE REPORT 1

A 65-year-old postmenopausal lady was referred to our hospital in view of bleeding per vaginum since 2 hours, after being gored by a bull from behind. On physical examination, the lady was found to be conscious and oriented, with severe pallor and dehydration and in haemodynamic shock, with a pulse rate of 120/min and a blood pressure of 80 systolic.

Her per abdominal examination revealed a full bladder. The local examination revealed a severe haematoma of the vulva and ecchymosis, which extended up to the mons pubis anteriorly, the inguinal ligament laterally, which involved the left labium majus and posteriorly up to the buttocks. A pelvic examination was not done as there was profuse bleeding. The further examination was performed under anaesthesia. The initial investigations revealed a haemoglobin level of 6.2g% and a haematocrit of 20%. The pelvic and the abdominal USGs which were done to rule out any internal injuries were unremarkable. A urinary catheter was placed, the urine was clear and the flow was undisturbed.

Following haemodynamic resuscitation, in view of profuse bleeding

per vaginum, the patient was taken to the operation theatre for an examination under anaesthesia and for further management. The EUA revealed a deep left lateral vaginal wall tear which measured about 8cm and which extended up to the ischio-rectal fossa. The ischio-rectal pad of fat was also seen. The vulval haematoma was evacuated, the dead space was obliterated with purse string sutures by using chromic catgut 1-0 and the vaginal laceration was sutured, leaving a drain in situ to drain the dependent area. No other injuries of the vagina, the rectum or the anus were found. The patient received 2 pints of blood transfusion and antibiotic prophylaxis.

The post-operative period was uneventful and the patient was discharged on the 8th day. The ethinyl oestradiol cream was prescribed for a better healing. The patient was examined after 6 weeks in the Outpatients Department and a normal vulva and vagina were revealed.

CASE 2

A 33-year-old lady presented with profuse bleeding per vaginum since 1 hour, after being gored by a bull from behind. On examination, the patient was found to be semiconscious with severe pallor and in haemodynamic shock, with a pulse rate of 110/min and a blood pressure of 90/50. Her haemoglobin was 5g% and her haematocrit was 17%. Her abdomino-pelvic scan was unremarkable.

A local examination revealed profuse bleeding with clots. After the initial resuscitation, the patient was rushed to the operation theatre for an examination under anaesthesia and for the further management. The examination under anaesthesia revealed a 10cm long vaginal laceration on the left lateral wall, which extended up to the fornix. The laceration was sutured with a no.1 chromic catgut. Other injuries of the vagina, the rectum and the anus were ruled out. The patient received 3 pints of blood transfusion and antibiotic prophylaxis. The postoperative period was uneventful and the patient was discharged on the 8th post-operative day. The lady was examined 4 weeks later and was found to have a normal looking vagina.

DISCUSSION

Non obstetric traumas to the vagina and the vulva can occur due to variety of reasons like vigorous sexual intercourse [1-4], an accidental fall on pointed objects in the straddle or the astride positions [4,5], snowboarding [6], bull horn injury [7,8], water skiing [9], jet skiing [10], blunt trauma [11], etc.

Bull horn injuries of the chest, abdomen [12] and the eyes [13] have been reported during bull racing or bull fighting or in a rural set up, where people live in close association with cattle [12]. But bull horn injuries of the vulva and the vagina are rare, as the perineum is a highly protected region due to the reflex adduction of the thigh. But the rich vascular area may be easily damaged [5].

The non obstetric vaginal lacerations differ greatly from the lacerations which are sustained during childbirth and they are generally classified into two types. The first type is relatively minor and it is associated with normal sexual intercourse or the first experience of sexual intercourse. Such lacerations usually resolve with minimal treatment. The second type of laceration which is caused due to various reasons, is deeper and more extensive, often resulting in copious vaginal bleeding. This condition can be life threatening and it may require an immediate intervention [1].

The simplicity of the external injury may hide the serious internal damage. Serious bone, abdominal and urological injuries may be seen, which are caused by goring and also there is a high probability of an infection [7,8]. Many cases resolve without a medical intervention, but the severe lacerations sometimes require hospitalization and they may be fatal. Up to 75% of the women in the emergency department, who present with vaginal lacerations require repair. A haemorrhagic shock may be present in up to 15% of the cases [1]. The lacerations which are caused by vigorous sexual intercourse tend to be 3-5cm long and they are usually located in the distal vagina. They are more commonly located posteriorly and to the right. The lacerations which extend into the peritoneal cavity occur in less than 1% of the patients [2]. Whereas, the lacerations which are caused by bull gore injuries depend on the direction of the goring and the height of the person, which are usually limited to the lower vagina, as the horns of the bull are long curved and are directed forwards with tapering edges [12].

The management of a vulval haematoma may range from a conservative approach to a surgical repair, depending on the site, the size of the injury and the haemodynamic stability of the patient. Arterial embolization has also been tried, with success [11]. The life threatening vaginal injuries almost always need surgical repairs [3, 4]. An established protocol provides an organized and a systemic

approach for treating the patients with a non-obstetric-related vaginal bleeding [1].

CONCLUSION

A bull gore injury though a common occurrence, The bull gore injuries of the vulva and the vagina are rare entities, which mostly occur in a rural setup, especially in a country like India. These cases mandate reporting, due to their severity at presentation, which are associated with torrential bleeding and widespread vulval haematomas, which lead to a haemodynamic compromise and the promptness which is required in dealing with such cases. In the clinical practice, especially in a rural set up like ours, it is important to be prepared to deal with such cases. Urological and abdominal injuries should always be kept in mind. A prompt referral and a timely surgical repair may be life saving. A set protocol in place may help in a prompt evaluation and a speedy intervention.

REFERENCES

- [1] Sloin M, Karimian M, Ilbeigi P. Nonobstetric Lacerations of the vagina. *J Am Osteopath Assoc*. May 1 2006; 106 (5): 271-73.
- [2] Geist RF. Sexually related trauma [review]. *Emerg Med Clin North Am*. 1988; 6:439-66.
- [3] Jana N, Santra D, Das D, Das AK, Dasgupta S. Nonobstetric lower genital tract injuries in rural India. *Int J Gynaecol Obstet*. 2008 Oct; 103(1):26-9. Epub 2008 Jul 11.
- [4] Sau AK, Dhar KK, Dhall GI. Nonobstetric lower genital tract trauma. *Aust N Z Obstet Gynaecol*. 1993; 33:433-35.
- [5] Singhal VP, Neelam, Ankur HK, Kaur P, Katiyar N, Traumatic massive vulval haematomas. *International Journal of Gynae Plastic Surgery*. 2010; 2: 35-37.
- [6] Kanai M, Osada R, Maruyama K, Masuzawa H, Shih HC, Konishi I.. A warning from Nagano: an increase in the vulvar haematomas and/or the lacerations which were caused by snow boarding. *J Trauma*. 2001; 50: 328-31.
- [7] Idikula J, Moses BV, Sadhu D, Agarwal S, Jahan G, Thomas J. Bull horn injuries. *Surg Gynaecol Obstet*. 1991; 172: 220-22.
- [8] Gupta V, Nanda A, Sonali, Bansal N, Behl N. A bull horn injury of the perineum: A case report and review of the literature. *Int J Gynae Plastic Surg*. 2009; 1: 35-36.
- [9] Smith BL. A vaginal laceration which was caused by water skiing. *J Emergency Nursing*. 1996; 22: 156.
- [10] Lacy J, Brennan E, Ornstein M, Allen L. A vaginal laceration which was caused by a high-pressure water jet in a prepubescent girl. *Pediatr Emerg Care*. 2007 Feb; 23(2):112-14.
- [11] Okur MH, Yildirim AM, Kose R. Severe haematoma of the vulva and a defloration which was caused by goring. *European Journal of Obstetrics and Gynaecology and Reproductive Biology*. 2005; 119(2): 250-52.
- [12] Rani M, Rohit Sharma A, Dikshit PC. Injuries which are caused by Bull Horns: Patterns and Prevention Protocols. Anil Aggrawal's Internet Journal of Forensic Medicine and Toxicology [serial online], 2010;11 (1) .
- [13] Singh RI, Thomas R, Alexander TA. An unusual case of a bull horn injury. *Aust N Z Obstet Gynaecol*. 1986; 14: 377-79.

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