

NON OBSTETRIC GENITAL TRACT INJURY IN A RURAL INDIAN MEDICAL COLLEGE

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ABSTRACT**BACKGROUND**

Obstetric trauma to the female genital tract being more common, non-obstetric genital tract trauma remains neglected. Reports of non obstetric traumatic injuries to the vagina specially laceration have been infrequent in the literature and offers only generalised approach to this problem with lack of an organised treatment protocol of such patients. Recently knowledge of NOGTI has become important due to modern life style such as high-speed road transportation, recreational activity and increase sexual assault which often leads to vulvovaginal injuries.

The objectives of this study were to determine the incidence, age distribution, site, type of injuries, mechanism of injuries and different management protocols.

MATERIALS AND METHODS

A descriptive study was carried out in the department of obstetrics and gynaecology of Malda Medical College and Hospital, West Bengal, India, for a duration of one year from January 2013 to 31st December 2014. Details of site, type, mechanism of injuries and management protocol were recorded from the operation theatre registration book of department of obstetrics and gynaecology. Total no. of cases studied during this period was 39.

RESULTS

Incidence of non-obstetric genital tract injuries (NOGTI) in Malda medical college was 2.537% of total emergency gynaecological admissions in the study period. The commonest sufferers belong to the age group of 20-30 years (43.59%). Commonest variety of NOGTI in the study was vulval haematoma (41.02%) and the commonest mechanism of injury was non coital injury like bicycle/ automobile/fall from height/ cattle horn (66.66%). We have not encountered any anorectal injury in this time period. Management option included immediate resuscitation along with primary repair, incision and drainage of vulval haematoma, packing only and removal of foreign bodies from genital tract. Only seven cases required blood transfusion and there was no mortality.

CONCLUSION

Non-obstetric genital tract injury is a serious problem which may involve significant loss of blood, and it may be life threatening in rural areas in some cases if there is delay in referral and necessary intervention.

KEY WORDS

Genital Tract Injury, Non Obstetric, Non Coital, Vulval Haematoma.

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BACKGROUND

Obstetric trauma to the female genital tract being commonest, non obstetric genital tract trauma remains neglected. Reports of non-obstetric traumatic injuries to the vagina specially laceration have been infrequent in the literature and offers only generalised approach to this problem with lack of an organised treatment protocol of such patients.¹ Recently knowledge of NOGTI has become important due to modern life style such as high-speed road transportation, recreational activity and increase sexual assault which often leads to vulvovaginal injuries.

NOGTI may vary from trivial superficial laceration to deeper extensive laceration. Superficial laceration is associated with normal sexual intercourse or first experience of sexual intercourse.² Only packing is sufficient treatment. Deep and extensive laceration often results in copious vaginal bleeding and may be life threatening and requires immediate intervention with blood transfusion.³ True incidence of such injuries is difficult to ascertain specially because the history of nature of vaginal injury usually remain closed. Geist⁴ reported that up to 75% of women in the emergency department with NOGTI require repair.

Malda medical college is a rural medical college and only referral centre of whole Malda district and parts of adjacent districts which are densely populated with people from low socio economic status and low literacy rate. This study was therefore conducted in Malda medical college to document the incidence, age distribution, types, sites, mechanism and management protocol of non obstetric genital tract injury.

MATERIALS AND METHODS

This descriptive study was carried out in the department of Gynaecology and Obstetrics of Malda medical college. The

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study period was one year extending from 1st January 2013 to 31st December 2013. Data was derived from the records of the operation theatre registration book of the gynaecology and obstetrics dept. Ethics approval was taken from institutional ethics committee.

Exclusion Criteria

Vulvo vaginal injury or vulval injuries occurring during labour and child birth or within six weeks after child birth were excluded from this study.

RESULTS

Total number of NOGTI admitted to the gynaecology and obstetrics dept. in Malda medical college during this study period of one year were 39.

Total gynaecological admission in Malda medical college and hospital during this period was 1539 out of which 39 cases were NOGTI. Therefore NOGTI formed 2.534% of the admission to the gynaecological ward during this period of one year (Table 1).

Table 2 shows that highest proportion of injuries (43.58%) occurred among age group of 20-30 years. The youngest patient was of 5 yrs. and the oldest was 73 years in our study.

Table 3 shows that 2/3rd (66.66%) of NOGTI occurred among the married women and majority of them (64.10%) belongs to low socio economic status.

During clinical examination of genitalia common type of injury noted was vulval haematoma (41.02%), followed by vaginal injuries (35.89%), vulval laceration (12.82%) and vulvovaginal injuries (10.25%) constituted the rest. (Table 4).

Table 5 shows that the commonest mechanism causing NOGTI was non coital injury (66.66%) such as bicycle/ automobile accidents, cattle horn, fall from height, leech bite, straddle type of injuries, vaginal foreign body. Coital trauma constituted only 33.33% of non obstetrics injury in the study.

As majority of the case noted in this study were vulval haematoma (41.02%) management protocol in such cases was incision and drainage of haematoma. Majority of vulval haematoma was non coital injury. Seven cases required blood transfusion of which five had vulval haematoma and two had extensive vaginal laceration. Vulvovaginal injuries requiring repair in 38.46% of the cases. 15.38% of cases only packing is sufficient. Intraperitoneal haemorrhage was not documented in our study and there was no requirement of laparotomy also. (Table 6).

Total Gynaecological Admission	Total No. of Nogti	Percentage
1539	39	(2.53%)

Table 1. Incidence of NOGTI

Age in Years	No. of Cases
<20	12
20-30	17 (43.58%)
31-40	2
41-50	2
>50	4

Table 2. Age Distribution (n=39)

Types of Injury	No. of Cases
Vulval haematoma	16(41.02%)
Vulval laceration	5(12.82%)
Vaginal injury	14(35.89%)
Vulvovaginal injury	4(10.25%)

Table 3. Distribution of the Cases according to the Types of Genital Injuries, n= 39

Socio Economic Status	No. of Patients
Lower	25(64.10%)
Lower middle	10(25.64%)
middle	4(10.25%)

Table 4. Socio Economic Status (n=39)

Mechanism		No. of Cases
Coital injury	Sexual assault	7 (17.9%)
	Consensual intercourse	6 (15.38%)
		Total -13 (33.33%)
Non	Bicycle/Automobile coital	9 (23.07%)
	Cattle horn	6 (15.38%)
	Fall from height	5 (12.82%)
	Straddle type of injury	2 (5.1%)
	Vaginal foreign body	2 (5.1%)
	Leech bites	2 (5.1%)
		Total- 26(66.66%)

Table 5. Distribution of Mechanism of Injuries (n=39)

Management Protocol	No. of Cases	Percentage
Incision and drainage	16	(41.02%)
Repair only	15	38.46 %
Pack only	6	15.38%
Removal of foreign body	2	5.128
Laparotomy	0	-

Table 6. Distribution of Cases according to Management Protocol (n=39)

DISCUSSION

The study found that NOGTI constituted 2.53% of all gynaecological admission in Malda medical college & Hospital. This finding is in accordance with the study conducted by Danso KA & Turpin CA (2.3%).⁵ The study conducted by Sau AK showed a much lower incidence (0.8%)⁶ of NOGTI. Such finding may be due to the fact that this medical college covers mainly the rural population group who are of low literacy and low socio economic status. The injuries occurred in all age group; majority of them (43.58%) were aged 20-30 years in our study and 66.66% of them were married and 64.10% of them belong to low socio economic group. Vulval haematoma (41.02%) was the most frequent type of genital tract injury noted in our study (Table 4). Commonest mechanism causing this injury in our study was non coital injury (66.66%) which is in accordance with the study conducted by Jana N ⁷(67.3%). Among non coital injuries bicycle/automobile accidents were the commonest (23.07%)cattle horn injury (15.38%), fall from height 12.82%, straddle type injury (5.1%), foreign body (5.1%) and leech bite (5.1%) were the rest. The other study conducted by Fallat ME et al⁸ showed that the commonest mechanism causing NOGTI was coitus. Coitus related injury constituted 33.33% of the cases in this study. This finding simulates the study of Jana N (32.7%).⁷ Vaginal laceration due to coital injury as noted in this study were more commonly located in the posterior and right fornix. The spatial orientation of the

cervix to the long axis of vagina predisposes the posterior fornix to injuries specially during coitus.^{9,10} Dickinson pointed out that the relative weakness of the structure of the posterior fornix which is supported by only a few bundles of connective tissue. The rt fornix is also prone to injury due to slight variation of uterocervical axis¹⁰. No cases of intraperitoneal complication were noted in our study. This study did not find any case of anorectal injury and this study is similar to the study conducted by Dash et al.¹¹ The study conducted by Jana N showed 17.6 % cases of anorectal injury. As majority of the cases in our study presented with vulval haematoma (41.02%), 'incision and drainage' is the commonest management protocol. 38.46% of the cases required repair only. 7 cases (17.9%) required blood transfusion of which 5 cases were vulval haematoma and 2 cases were extensive vaginal laceration.

CONCLUSION

Non-obstetric genital tract injury is a serious problem which may involve significant loss of blood, and it may be life threatening in rural areas in some cases if there is delay in referral and necessary intervention. Early arrival, early referral, prompt resuscitation and prompt management can save lives of women and can prevent unnecessary morbidity.

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