



## Clinical Study of Proportion of Predisposing Events and Causes of Paraphimosis

### KEYWORDS

Phimosis, Paraphimosis, Circumcision

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**ABSTRACT** Paraphimosis is very common condition occurring at all ages though it is most common in younger age groups. Most commonly it is treated by emergency reduction and then elective circumcision. In this study we have analysed various causes for paraphimosis. We have studied patients from all age groups coming to the surgery outpatient department (OPD). Though some degree of phimosis is basic etiological factor and is the leading cause in all cases of paraphimosis. Various manipulative acts like retraction by parents during cleaning glans, post coital forceful retraction of phimotic skin, and pre catheterisation retraction of prepuce leads to forceful retraction of this phimotic prepuce over the glans penis. This phimotic skin gets stuck tightly around the coronal sulcus leading to this condition. Here we have studied various causes and predisposing events which lead to this forceful retraction of prepuce over glans penis.

#### SUMMARY:

Most common predisposing event leading to paraphimosis is forceful retraction during sexual intercourse, followed by self retraction out of curiosity or during acts like urination. Then comes post masturbation which contributes nearly of total patients. Retraction by mother to clean smegma and glans comes around. Iatrogenic (post catheterisation) cause remains least common. In small group of patient no specific cause can be found.

Most common cause in paediatric age group is retraction by self out of curiosity or during handling of genitalia while in young adult age group masturbation and sexual intercourse is most common predisposing factor.

#### INTRODUCTION:

Paraphimosis (Greek-par-ah-fi-mosis): It is the condition where tight prepuce has been retracted but cannot be returned and it is constricting the glans penis which is engorged and oedematous.

Paraphimosis is one of the important commonly occurring surgical emergency related to male sexual organ-penis. If it is not treated promptly it leads to further rise of swelling, pain, ischemia and eventually gangrene of glans penis.

Basic aetiological factor for paraphimosis is some degree of phimosis. This phimotic skin can get retracted behind the glans penis during different procedures. This procedures or manipulation acts vary in different individual depending upon their age groups and other circumstances. Forceful retraction of prepuce may follow after different acts like

1. Natural curiosity and handling of external genitalia in children.
2. Retraction of phimotic foreskin by parents attempting to clean underlying glans
3. In young adults it may follow after vigorous sexual activity
4. Post masturbation
5. In elder age groups it might follow after Foleys catheterisation if surgeon forgets to reposit skin on glans.
6. In this study we have studied prospectively the incidence of all these predisposing events which leads to retraction of foreskin leading to paraphimosis.

#### MATERIAL AND METHODS:

This study was carried out prospectively over period of two years. All patients of paraphimosis attending the surgery outpatient department (OPD) were selected. Total 100 patients were taken for study.

#### Following points were observed

1. Age of the patient: All patients were divided in to different age groups.

- a. Paediatric age group: was categorised as age between 0- 12 yrs. This age group is subdivided again in to two groups as 0-6 and 7-12 yrs.
- b. Young and adult age groups: were divided as 13 yrs to 20 yrs, 21-40yrs, 41-60yrs.
- c. Old age group: all patients above 60 yrs are taken.

2. Predisposing events: Various events leading to retraction of foreskin were studied. They are identified after taking careful history from patients. In pediatric age groups parents were asked about the incidence along with the children. Most common predisposing events observed are

- retraction by self
- retraction by mother
- sexual intercourse, masturbation
- Post catheterisation (iatrogenic)

3. Time of presentation: this is also an important factor as far as the prognosis of the condition is considered. Patients were asked regarding exact time of occurrence of incidence and the time calculated from the time of occurrence of incidence till the time of first consultation in surgical outpatient department. This is divided in to different categories as immediate, within 1 day, 2-4 days, 5-6 days & more than 6 days.

All equipments and other facilities required for this study were freely available in our hospital. No special equipment necessary.

All patients after initial evaluation of related history were submitted to treatment. Patients were given anaesthesia, general anaesthesia for paediatric age group and dorsal penile nerve block with or without a ring block by using 1% xylocaine without adrenaline for adult patients. All patients were treated on day care basis.

#### DISCUSSION:

All patients who had paraphimosis were presumed to have

some degree of phimosis in which skin was retractable behind the glans penis with or without force. All patients were evaluated systemically pre-operatively. Various observation found were as below.

**Predisposing event:**

Various etiological predisposing events leading to forceful retraction of foreskin were studied. It varies according to different variables as age of the patient, marital status, personal habits, and sexual behaviour. Most important being age group. Age plays an important role in predisposing factor for the forceful retraction of fore skin. As this is related to most important male sexual organ obviously a specific age has got its role in its predisposing event. Most common cause observed in paediatric age group being curiosity toward the developing genitals. As in this age group process of developing secondary sexual characteristics, development of sex organs, hormonal effects on genitalia starts it becomes more obvious that children become more aware and conscious about their sex organs. Incidence of handling of genitalia, curious retraction of foreskin and fondling with external genitalia increases. Many a times involuntary erection of penis also is an important factor in forceful retraction of prepuce over glans penis. This has lead to increased incidence of paraphimosis in this age group.

In young and young adult age groups actual sexual intercourse and masturbation were important leading predisposing factors for paraphimosis. Commonly a person having some degree of phimosis can have sexual intercourse without retraction of foreskin but if it gets retracted forcefully behind the glans and person forgets to reposit back it on the glans it will lead to paraphimosis immediately. This predisposing event is very commonly observed in the males who are just married and had their first sexual intercourse, as prepuce gets retracted first time forcefully behind the glans penis at the time of insertion during intercourse. In tighter phimotic patients forceful retraction after vigorous intercourse can lead to paraphimosis in which manual reposition by individual himself becomes very difficult.

In older age groups this condition is rare and can occur after retraction of foreskin during urination or during ward procedure like Foleys catheter introduction. In later condition if surgeon forgets to reposit foreskin over the glans penis it will lead to paraphimosis immediately. Reposition of foreskin immediately after catheterisation will definitely prevent this complication.

Thus here predisposing event leading to paraphimosis seems to be forceful retraction during sexual intercourse (32%), followed by self retraction (30%). Then comes post masturbation (18%). Retraction by mother to clean smegma and glans comes around 10%. Iatrogenic cause remains least common (5%)

**Age incidence: (Table 2 and pie chart)**

Most common age group for occurrence of paraphimosis was found to be between 1 to 12 years. Incidence of paraphimosis goes on decreasing with age. In our series patients belonging to this age group were 32. i.e. 32 % patients were from this age group which correlates with the other series like Gairadner(1949). However children ranging between age group between 6 to 12 yrs were found to have more incidence of paraphimosis (26 patients) as compared to age between 1 to 6 yrs (6 patients). This is mostly attributed to the natural curiosity at this growing age and handling of genitalia during this age group. Second most peak of incidence of paraphimosis was observed in adult age group ranging from 21 yrs to 40 yrs. Total 28 patients belong to this age group. Unawareness of proper knowledge about sexual intercourse may contribute to this factor. Common predisposing factor in this age group is either post masturbation or following vigorous sexual activity. As the age increases incidence of paraphimosis went on decreasing. There were 24 patient between

age from 41 yrs to 60 yrs. Only two patients were observed having paraphimosis after the age of 60 yrs.

**Time of presentation (Table 3)**

Average time of presentation was 1<sup>st</sup> to 4<sup>th</sup> day of occurrence of paraphimosis. Almost 84% patients presented to us within this period. Latest possible presentation to surgeon was observed after 15<sup>th</sup> day, but surprisingly there was no any ischemic changes noted at the glans penis.

**CONCLUSION:**

Most common predisposing event leading to paraphimosis is forceful retraction during sexual intercourse (32%), followed by self retraction out of curiosity or during acts like urination(30%). Then comes post masturbation which contributes nearly 18% of total patients. Retraction by mother to clean smegma and glans comes around 10%. Iatrogenic(post catheterisation) cause remains least common(5%). In small group of patient(5%) no specific cause can be found.

Most common cause in paediatric age group is retraction by self out of curiosity or during handling of genitalia while in young adult age group masturbation and sexual intercourse is most common predisposing factor.

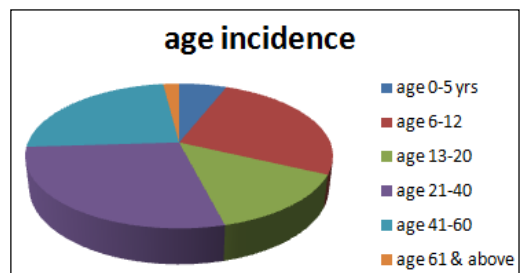
Time of presentation is between 1<sup>st</sup> to 4<sup>th</sup> day.

**TABLE 1. EVENT AND AGE WISE DATA OF PREDISPOSING EVENTS**

Event	Age group in yrs	0-12	13-40	40-60	60 & above	Total
Retracted by self		18	09	03	00	30
Retracted by mother		10	NA	NA	NA	10
Post masturbation		02	12	05	00	18
Following sexual intercourse		NA	20	11	00	32
Post catheterisation		00	00	03	02	05
Unknown		02	01	02	00	05
Total		32	42	24	02	100

**TABLE 2 AGE INCIDENCE**

Age group	Total
0-5 yrs	6
6-12 yrs	26
13-20 yrs	14
21-40 yrs	28
41-60 yrs	24
61 and above	02
Total	100



**TABLE 3: Time of presentation**

Time of presentation	Number of patients
Immediate	04
Within one day	20
2-4 days	68
5-6 days	06
More than six days	02(15 <sup>th</sup> day)
Total	100

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