

# Incidence of Reactionary Hemorrhage Among Patients After Open Hemorrhoidectomy at Surgical Unit of Tertiary Care Hospital

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## ABSTRACT

**Objective:** To determine frequency of delayed post haemorrhoidectomy bleeding

**Study Design:** Cross-sectional study

**Place and Duration of Study:** This study was conducted at Surgical Department of Mardan Medical Complex, Mardan from June 2017 to May 2019.

**Materials and Methods:** Upon a sample of 336 consecutive patients (chosen via non-probability, consecutive sampling) of either gender, presenting with 3rd and 4th degree haemorrhoids and scheduled to undergo haemorrhoidectomy. After taking written informed consent, data was recorded onto a pre-structured questionnaire containing inquiries pertaining to basic biodata, sociodemographic details, disease history, inferences obtained from thorough examination (including proctoscopy) and follow up (after two weeks) findings (especially reactionary haemorrhage). The data obtained was analyzed using SPSS v. 21.0.

**Results:** The mean age of the sample stood at  $45.5 \pm 6.85$  SD and the gender distribution was largely equal. The incidence rate of reactionary haemorrhage was revealed to be 3.57% and stratification revealed reactionary haemorrhage did not vary with gender and age.

**Conclusion:** After careful consideration, it can be concluded that the frequency of reactionary haemorrhage is low at the study setting and the findings are consistent across both genders and all age groups.

**Key Words:** Reactionary Haemorrhage, Haemorrhoids, Treatment Outcome, Adverse Events, & Post-Operative Complication

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## INTRODUCTION

Hemorrhoids are displaced venous cushion in the lower rectum. Because of their rich vascular supply, highly sensitive location, tendency to engorge and prolapse, hemorrhoidal venous cushions are common causes of anal pathology.<sup>[1]</sup> Above the age of 50 years around 50% of population experience some kind of discomfort from hemorrhoids but the percentage of patients presenting to physicians is very less so the exact prevalence is not known.<sup>[2]</sup>

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In UK the prevalence was reported to be 16-36% in general population.<sup>[3,4]</sup>

Symptoms can range from mildly bothersome, such as pruritus, to quite concerning, such as rectal bleeding. Although hemorrhoids are a common condition diagnosed in clinical practice, it is important to rule out more serious conditions, such as other causes of gastrointestinal (GI) bleeding, before reflexively attributing symptoms to hemorrhoids therefore proctoscopy, and if necessary lower GI endoscopy is done to rule out other causes of bleeding per rectum.<sup>[5]</sup> Management depends on degree of hemorrhoids. And includes lifestyle modification, laxatives, injection sclerotherapy for 1<sup>st</sup> degree hemorrhoids, band ligation for 1<sup>st</sup> and 2<sup>nd</sup> degree hemorrhoids. For 3<sup>rd</sup>, 4<sup>th</sup> and failed outpatient procedures (sclerotherapy and band ligation) Hemorrhoidectomy, Hemorrhoidal Artery ligation (HAL) and Procedure for Prolapsed Hemorrhoids (PPH) are performed.<sup>[6-9]</sup> Hemorrhoidectomy is the most commonly performed procedure for hemorrhoids in surgical department. There are two techniques of hemorrhoidectomy, open (Milligan Morgan hemorrhoidectomy) and closed technique. In both the procedure the hemorrhoidal

tissues are excised while saving sphincters and hemorrhoidal vessels are ligated.<sup>[10]</sup>

Open hemorrhoidectomy is most commonly performed procedure in our setup for hemorrhoids. There are many complications of open hemorrhoidectomy. The most common early complications are pain, urinary retention, bleeding, while late complications include abscess, fistula formation, incontinence, anal stenosis.<sup>[11-13]</sup> Bleeding following anorectal procedure is a common complication and accounts for 0.4–1.2% of cases<sup>[14]</sup>. Post-hemorrhoidectomy bleeding varies from 0.3% to 6% after hemorrhoidectomy<sup>[15]</sup>. There is no difference for open and closed technique. Post-hemorrhoidectomy bleeding is divided into two groups early occurring in 24 to 48 hrs following surgery and these result from slippage of ligature (secondary hemorrhage) whereas bleeding up to 2 weeks from hemorrhoidectomy is referred to as delayed bleeding (reactionary hemorrhage) and is often resulting from local trauma or infection.<sup>[16]</sup> The frequency of delayed post-hemorrhoidectomy in different studies reported to be 0.9% to 10%.<sup>[17]</sup>

Although there are sufficient studies on delayed post-hemorrhoidectomy bleeding but there is limited local data. The aim of this study is to determine the frequency of delayed post hemorrhoidectomy bleeding at tertiary care hospital Mardan, this study will provide us the latest and updated information regarding post-hemorrhoidectomy bleeding and help us find effective & easy therapy for the control of post-hemorrhoidectomy bleeding that will prevent or reduce financial & psychological burden, hospital stay & complications.

## MATERIALS AND METHODS

This cross-sectional study was conducted at Surgical Department of Mardan Medical Complex, Mardan from June 2017 to May 2019.

**Ethical Approval:** After approval from hospital ethical committee, a total of 336 consecutive patients with 3rd and 4th degree hemorrhoids, of both gender and any age group were included.

**Inclusion and Exclusion criteria:** Patients with chronic liver disease, 1st and 2nd degree hemorrhoids, bleeding disorder and not giving consent were excluded from this study.

**Sampling technique:** All the patients were selected through non-probability consecutive technique. Patients were included in the study after taking informed consent. Detailed history and thorough examination including proctoscopy of the patients were done. All patients underwent open hemorrhoidectomy. Patients were asked for follow up after two weeks and assessed for reactionary hemorrhage.

**Data Analysis:** All the data was recorded on a standardized Performa. Bias and confounders in the study were controlled by strictly following the

exclusion criteria. The data was analyzed with the help of computer software SPSS for windows version 21. For categorical variables, frequencies were calculated while for continuous variables; mean and standard deviation were calculated.

## RESULTS

In Age Wise Distribution, 165 (49.10%) patients were recorded in 20-45 Years Age Group. 171 (50.59%) patients were recorded in 46-65 Years Age Group. (Table No. 1) In Gender Wise Distribution, 175 (52.08%) patients were recorded as Male while 161 (47.91%) patients were recorded as Females. (Table No. 2).

**Table No. 1: Frequencies and Percentages for Age (n=336)**

Age Group	Frequencies	Percentages
20-45 Years	165	49.10%
46-65 Years	171	50.59%
<b>Total</b>	<b>336</b>	<b>100%</b>
<b>Mean and SD for Age</b>	<b>45.5 ± 6.85</b>	

**Table No. 2: Frequencies and Percentages for Gender (n=336)**

Gender	Frequencies	Percentages
Male	175	52.08%
Female	161	47.91%
<b>Total</b>	<b>336</b>	<b>100%</b>

**Table No. 3: Frequencies and Percentages for Reactionary Hemorrhage (n=336)**

Reactionary Hemorrhage	Frequencies	Percentages
Yes	12	3.57%
No	324	96.42%
<b>Total</b>	<b>336</b>	<b>100%</b>

**Table No. 4: Stratification of Reactionary Hemorrhage with respect to Age (n=336)**

Age	RH	Frequencies	Percentages	P Value
20-45 Years	Yes	06	1.78%	0.949
	No	159	47.32%	
46-60 Years	Yes	06	1.78%	
	No	165	49.10%	

**Table No. 5: Stratification of Reactionary Hemorrhage with respect to Gender (n=336)**

Gender	RH	Frequencies	Percentages	P Value
Male	Yes	07	2.08%	0.658
	No	168	50%	
Female	Yes	05	1.48%	
	No	156	46.42%	

As per frequencies and percentages for reactionary hemorrhage, 12 (3.57%) patients experienced reactionary hemorrhage. (Table No. 3). Stratification of reactionary hemorrhage with respect to age and gender is recorded at Table No. 4 and 5 respectively.

## DISCUSSION

Hemorrhoids are dilated rectal veins & a disorder of the anal cushions<sup>1</sup>. They are common with raised intra-abdominal pressure e.g. constipation & pregnancy<sup>11</sup>. Thomson showed they occur due to fragmentation of Parks' ligament which causes their distal enlargement. Hemorrhoids usually occur at 3, 7 & 11 o'clock position & cause bright red painless bleeding, mucus discharge, mucosal prolapse, pruritus & pain<sup>18</sup>. They are classified into 4 degrees: 1<sup>st</sup>; only bleed, 2<sup>nd</sup>; prolapse & return automatically, 3<sup>rd</sup>; prolapse but return on reduction & 4<sup>th</sup>; permanently prolapsed<sup>19</sup>. Open excisional hemorrhoidectomy is the gold standard for third and fourth degree hemorrhoids. Milligan Morgan hemorrhoidectomy is easier to perform and is the most common operation performed in Pakistan for hemorrhoids. Ferguson hemorrhoidectomy is little bit difficult for the juniors to learn and perform and takes more time. Stapler hemorrhoidectomy may replace the open hemorrhoidectomy in future but due to high cost of Stapler gun it is not going to replace open hemorrhoidectomy in Pakistan.

## CONCLUSION

After careful consideration, it can be concluded that the frequency of reactionary haemorrhage is low at the study setting and the findings are consistent across both genders and all age groups.

### Author's Contribution:

Concept & Design of Study:	Asif Imran
Drafting:	Manzoor Ahmad, Zarka Sarwar
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Revisiting Critically:	Asif Imran, Manzoor Ahmad, Zarka Sarwar
Final Approval of version:	Asif Imran

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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