SURGICAL EMERGENCIES IN A HIV POSITIVE PATIENT

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ABSTRACT

BACKGROUND

With an exponential rise in the prevalence of HIV infection among the population the incidence of surgical emergencies in these patients is also high. Keeping in view of the immunocompromised state, a Retrospective Observational Study was done to look at the causes and also the outcomes with regards to CD4 cell count.

METHODS

Case Records of 127 patients who were admitted to the Emergency Surgical Ward, diagnosed/screened positive for HIV positive status over a period of three years were studied. The various types of surgical emergencies and outcomes following interventions among these patients were analysed with regards to the CD4 cell counts.

RESULTS

Acute abdomen was the commonest surgical emergency reported among these patients where 93 patients out of 127 presented with acute abdomen whereas remaining 34 patients had nonabdominal surgical causes. Morbidity reported among these patients has no relation to the CD4 cell count whereas mortality was seen mostly among patients with low CD4 cell count.

CONCLUSION

Acute surgical emergencies are no longer uncommon among patients with HIV positive status and the outcomes are also reasonably good. A thorough and a careful clinical evaluation is mandatory before a surgical intervention is planned as a significant number of patients can be managed conservatively.

KEYWORDS

HIV, Surgeon, Emergency.

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INTRODUCTION: The incidence of HIV Infection is on an exponential rise and so as the various surgical emergencies in these patients.

HIV/AIDS patients are not a homogeneous group and for clinical purpose it is imperative to stratify them into two groups. Patients with HIV infection only who have a lower operative risk are less contagious whereas patients with AIDS are more contagious and are prone for operative complications.[1]

HIV/AIDS patients presenting with surgical disease may be divided into two clinical categories, patients with life-threatening surgically correctable disease and the other group requiring surgical interventions intended for diagnosis, prophylaxis, or palliation.[2]

Most patients with HIV status diagnosed prior to the admission or found positive on screening at the time of admission often present with abdominal symptoms related to organomegaly and intraperitoneal and/or retroperitoneal lymphadenopathy caused by opportunistic infections and neoplasia.[2] Laparotomy is rarely necessary to evaluate organomegaly or lymphadenopathy and should generally be reserved for therapeutic procedures such as appendicectomy, drainage of pus, closure of a hollow viscous perforation resection of neoplasm, and relief of obstruction.[3]

Patients can also present with infective conditions like cellulitis, necrotizing fasciitis, Fournier's gangrene which might require an emergency surgical intervention to treat these infections and palliate the symptoms.

A surgeon when encountered with patients with HIV positive status presenting with surgical conditions is often doubtful regarding the need for an intervention and the possible outcomes following a surgical intervention in view of the immunocompromised status. This often leads to an undue delay which can have an impact on the outcomes.[4]

The present study focuses on the various surgical emergencies often encountered among patients with HIV positive status admitted to the department of General Surgery and their outcomes. An attempt is made to study

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the various surgical conditions which required an emergency surgical intervention and also those conditions which were managed conservatively.

Clinical presentations among HIV patients presenting with a surgical emergency were found to be similar to those seen in patients with non-reactive HIV status. Similarly, surgical procedures in HIV patients present with indications and characteristics common to non-HIV population. In particular, there are no statistically significant differences between the surgical success rate and mortality and morbidity rates.[1]

The complications reported following a surgical intervention were found to be higher among patients with low CD4 counts (< 200) and this can also be explained by the fact that most of the interventions were carried out for conditions related to sepsis.[5]

The ultimate outcome of surgery in HIV-infected patients is most likely dependent upon many independent variables and not just the underlying viral infection or disease stage.[6]

HIV status does not influence the outcome of general surgical admissions and should not influence surgical management decisions. In HIV-positive surgical patients, CD4 counts have no relation to in-hospital outcome in a heterogeneous group of surgical patients.[7]

AIM: To study the various surgical emergencies encountered in HIV positive patients with regards to their outcome.

OBJECTIVES:

1. To identify the various causes of surgical emergencies often encountered in patients with HIV Positive status.
2. To determine the outcome following surgical intervention among these patients with regards to morbidity & mortality.

Study Design: A Retrospective observational study carried out in the Department of General Surgery, Gandhi Hospital Secunderabad, tertiary care centre in the state of Telangana.

MATERIALS AND METHODS: Case Records of all the patients with HIV positive status who have been admitted to the Emergency Department of General Surgery Gandhi Hospital with a surgical emergency from December 2012 to December 2015 were studied and the various causes for these admissions are analysed. The type of surgical intervention carried out in these patients is looked at with regards to morbidity and mortality. Morbidity is related to delayed wound healing following a surgical site infection or a progressive disease in spite of intervention. Opportunistic infections in the form of upper respiratory tract infections and urinary tract infections during the hospital stay are likely, there by prolonging the duration of stay with a delayed outcome. Mortality is usually a 30-day mortality following a surgical intervention.

Inclusion Criteria: All the patients in the age group of 13 to 60 years with HIV seropositive status and who were admitted to the emergency surgical ward with an acute surgical condition.

Exclusion Criteria: Patients with HIV positive status and acute abdomen along with comorbid illnesses like diabetes mellitus, coronary heart disease and HBsAg positive status.

RESULTS & OBSERVATION: A total number of 127 patients were admitted to the emergency surgical ward during the period from December 2012 –December 2015.

Demographic Data:

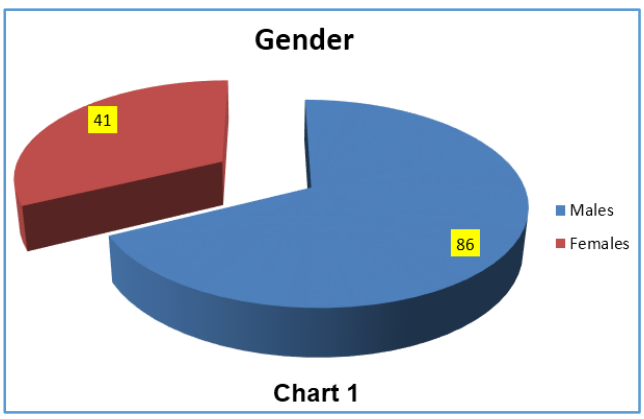


Chart 1

Sl. No.	Age group	Males	Females	Total Number of patients
1	20-30 Years	32	06	38
2	30-40 Years	38	11	49
3	40-50 Years	09	22	31
4	50-60 Years	07	02	09

Table 2

Surgical Emergencies:

Sl. No	Surgical Condition	Number of Patients
1	Acute Abdomen	93 patients
2	Non Abdominal causes	34 patients

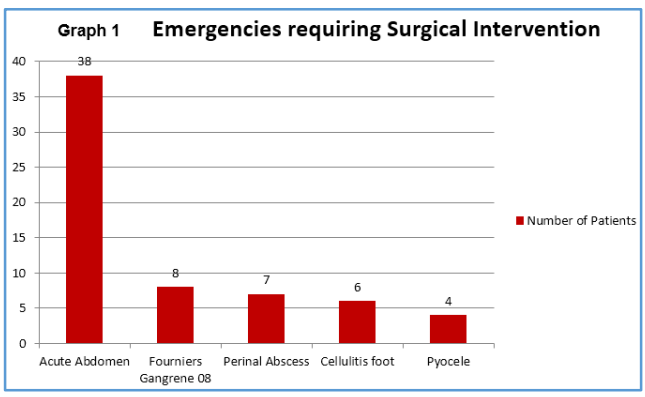
Table 3

Sl. No.	Acute Abdomen	Number of patients
1	Pain - Right Iliac Fossa	26
2	Duodenal Ulcer Perforation	13
3	Intestinal Obstruction	24
4	Acute Pancreatitis	08
5	Renal Colic	07
6	Liver Abscess	07
7	Acalculous Cholecystitis	03
8	Mesenteric Ischemia	02
9	Acute Gastritis	02
10	Amoebic Colitis	01

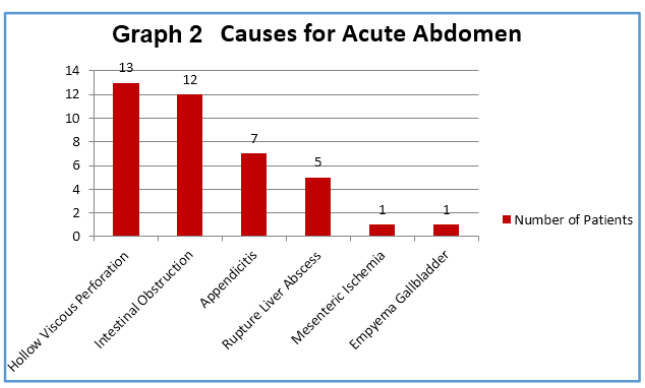
Table 4

Sl. No.	Non Abdominal Causes	
1	Fournier's Gangrene	08
2	Cellulitis	15
3	Perianal Abscess	07
4	Pyocele	04
Table 5		

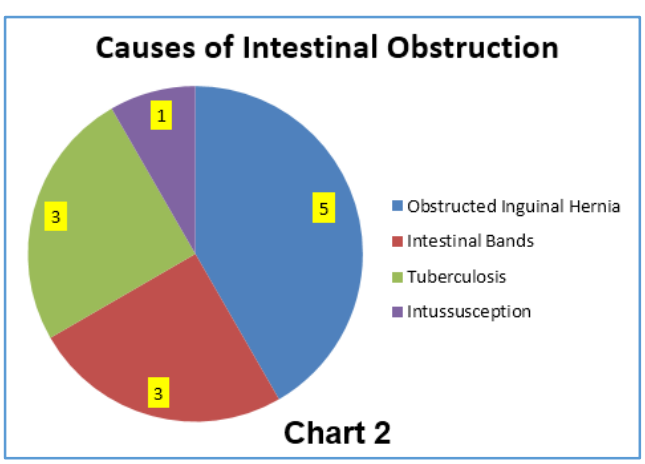
Surgical Procedure: 63 patients underwent acute surgical Intervention among the 127 patients who were admitted to the emergency surgical ward for the following conditions.



Indications for Laparotomy: 39 patients admitted with Acute Abdomen required Emergency Laparotomy for the following conditions



12 patients presenting with Acute Intestinal Obstruction underwent laparotomy for the following causes.



MORBIDITY & MORTALITY

Outcomes following Surgical Intervention in 39 patients for Acute Abdomen:

I. Abdominal Conditions

1. Surgical Site Infections 9
   - Wound Dehiscence 5
   - Partial 3
   - Complete (Burst Abdomen) 2
2. Respiratory Tract Infection 5
3. Urinary Tract Infections 3
4. Deaths 3

II. Non Abdominal Conditions

1. Pyocele: Orchidectomy done for 3 cases 3
2. Perianal abscess:
   Fistula-in-ano in 4 cases postoperatively 4
3. Cellulitis (Necrotizing fasciitis):
   Below Knee Amputation in 1 case 1
4. Fournier's gangrene: Nonhealing ulcer in 1 case 1
5. Death in 2 cases 2

DISCUSSION: Surgical emergencies are not uncommon in HIV positive patients. There are a total number of 127 patients who were admitted with an acute surgical condition to the Emergency Surgery Department at Gandhi Hospital during the last three years from December 2012 to December 2015.

- Majority of the patients were males (67.7%) and the remaining were females (32.3%), the commonest age group reported among males was 30 to 40 years. Whereas females were in the age group of 40 to 50 years.
- Out of which only 63 patients (49.60%) required surgical intervention.
- Out of these 127 patients, the most common type of surgical emergency was acute abdomen seen in 93 (73.23%) patients out of which only 39 (30.70%) patients required emergency laparotomy and procedure.
- Among the non-abdominal causes, the commonest cause for admission was cellulitis of lower limb seen in 15 patients among whom 10 were managed conservatively with antibiotics and analgesics, four patients required fasciotomy where as one patient with necrotizing fasciitis underwent below-knee amputation
- Fournier's gangrene was seen in 8 patients who required extensive debridement with coverage by broad spectrum antibiotics. One patient had a non-healing ulcer requiring a split skin graft.
- Pyocele was seen in 4 patients which required exploration & orchidectomy in all the four cases.
- Among the causes of acute abdomen, hollow viscous perforation was the commonest cause seen in 13 patients.

- Duodenal ulcer perforation was reported in 9 patients whereas ileal perforation in 2 patients and gastric ulcer perforation in 1 patient.
- Mesenteric ischemia presenting as acute abdomen was seen in 1 patient. Extensive resection of gangrenous small bowel with end jejunostomy was done and the patient succumbed to death on the second postoperative day.
- Acute cholecystitis was seen in 2 patients and one patient had features of empyema gallbladder.

Among the 67 patients who were admitted to the emergency surgical ward and managed conservatively, 26 patients presented with acute abdomen with pain in the right iliac fossa where Alvarado score of less than 5 was documented. These patients were managed conservatively with antibiotics and analgesics.

- Among the remaining 41 patients, 8 Patients had clinical signs and symptoms of acute pancreatitis, 7 patients presented with renal colic and 2 patients presented with acute gastritis.
- One patient with amoebic colitis who were managed conservatively.
- 12 patients presented with signs and symptoms of subacute intestinal obstruction who were managed conservatively following which the obstruction was relieved.
- About 10 patients presented with cellulitis of the lower limb which was managed conservatively with appropriate antibiotics.
- About 2 patients presented with symptoms of liver abscess with size measuring less than 5 cm, were managed with appropriate antibiotics.

The above findings highlight the fact that although it is not uncommon for patients with HIV positive status to present with a surgical emergency but surgical intervention may not be required for all the patients.

Majority (52.75%) of the patients were managed conservatively with a close and a careful followup thereby avoiding the morbidity and mortality related to surgical intervention.

COMPLICATIONS: Among patients who underwent laparotomy

- Surgical site infections in 9 patients.
- Partial wound dehiscence in 5 patients.
- Complete wound dehiscence with burst abdomen was seen in 3 patients.
- Respiratory and urinary tract infections were seen in 5 and 3 patients respectively.

Three patients succumbed to death who underwent laparotomy for hollow viscous perforation due to uncontrolled sepsis: Among the nonabdominal causes;

- Three patients were subjected to orchidectomy.
- Four patients who underwent drainage of the perianal abscess developed fistula-in-ano.
- One patient was subjected to below-knee amputation due to necrotizing fasciitis of the lower limb.

Two patients succumbed to death and again sepsis being the cause.

Most of the patients who had complications related to morbidity following a surgical intervention had normal CD4 lymphocyte count whereas CD4 count was low among those patients who succumbed to death. This highlights the fact that mortality in HIV positive patients is directly related to the CD4 count.

CONCLUSION:

1. The most common cause of surgical emergency in HIV positive patients is acute abdomen due to duodenal ulcer perforation and Fournier's gangrene was the commonest cause among non-abdominal causes.
2. The morbidity following a surgical intervention among these patients was not influenced by the CD 4 cell count where as those patients who succumbed to death due to severe sepsis had a low CD4 Cell count.

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