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Article in *Indian Journal of Surgery* · January 2016

DOI: 10.1007/s12262-015-1417-2

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Clinical Profile of Surgical Diseases with Emergence of New Problems in HIV+ Individuals

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Received: 6 January 2015 / Accepted: 3 December 2015 / Published online: 25 January 2016
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Abstract North Karnataka is one of the regions with the high prevalence of HIV+ individuals. Bijapur is a district in North Karnataka with high prevalence as per fact sheets of NACO of March 2012. Better awareness, access to health care, and antiretroviral therapy have improved survival and increase in number of people living with HIV/AIDS (PLHA). Improved survival has increased their attendance to hospitals with variety of surgical problems, some known and some less known. The percentage of HIV+ individuals was 1.64 % among all admissions. Of these individuals, 13.65 % (272) had surgical problems. Abscesses were the commonest. Abscesses at uncommon sites also were encountered. Anorectal pathologies, tuberculosis, lymphadenopathy, appendicitis, etc. commonly seen in HIV+ individuals were seen. Drug-induced pancreatitis due to anti retroviral therapy was one of the common problems encountered. Uncommon conditions like ureteric calculi, external iliac artery thrombosis, diaphragmatic eventration, and few more were observed. Even though literature on AIDS/HIV is abundant, there is less information on surgical conditions encountered more so from this part of the subcontinent. Hence, it was decided to report the profile of the conditions encountered.

Keywords HIV · AIDS · Surgical diseases · Clinical profile

Introduction

Bijapur, a district place in Northern part of Karnataka state, is one of the areas with high prevalence of HIV+ status and AIDS due to significant migratory population [1]. Better awareness regarding the disease, access to health care, and antiretroviral therapy have contributed to improvement in the management of HIV/AIDS. This has improved their survival resulting in increase in the number of people living with HIV/AIDS (PLHA). Karnataka state has 0.63 % prevalence of adult HIV/AIDS as per state fact sheets of NACO, 2009 estimates. Bijapur District is categorized as A category with >1 % prevalence in ANC attendees [1]. DAC News letter in March 2012 suggests that there is decrease in the newly diagnosed HIV disease with overall reduction in the incidence, but there is increase in the number of patients living with HIV/AIDS [2]. With increase in the number of people living with HIV/AIDS, intervention for known surgical problems was often required and new surgical problems hitherto less reported in the literature were also observed. Even though literature on HIV/AIDS is abundant, there is paucity of information with respect to surgical diseases encountered in the Indian subcontinent and are mainly related to specific problems [3]. Hence, this study was taken up to know the clinical spectrum.

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Type of the Study

This is a cross-sectional observational study.

Duration of the Study

This study was conducted from October 2008 to April 2013.

Inclusion Criteria

All HIV+ individuals who attended and treated at a district level teaching hospital for surgical problems were included. Appropriate written informed consent was taken. The study was conducted after Institutional Ethical Committee issued clearance.

Methodology

Detailed history and clinical examination findings were recorded. CD4 count was not considered mandatory for inclusion. HIV+ status was confirmed as per NACO guidelines or the individuals were already on treatment or aware of the status. They underwent appropriate treatment as deemed necessary according to the diagnosis.

Results

The incidence of HIV+ admissions was 1.64 %. Furthermore, 1792 HIV+ patients were admitted during study period and 272 (13.65 %) had surgical problems. Male to female (M:F) ratio was 2:1. Patients were mainly from third to fifth decade (Table 1).

Abscesses topped the list. Apart from the common sites like peri-anal region, abscesses were seen in the parapharyngeal region and brain (Table 2; Figs. 1 and 2).

Anorectal pathologies formed 41.54 % of the study group. Four admissions were for appendicitis. Antiretroviral drug therapy-induced pancreatitis was ten in addition to two alcohol-induced pancreatitis. Tuberculosis was present in 28. Twelve had pulmonary Koch's with complications, 6 abdominal TB, and 6 tubercular cervical adenitis (Table 3).

Twelve were admitted for road traffic accident related injuries. HIV+ status was an incidental finding. All of them were under the influence or alcohol.

Other surgical diseases like hydrocele, portal hypertension, ureteric and bladder calculi, inguinal hernia, hypothyroidism, varicose veins, calculous cholecystitis, malignant melanoma,

Table 1 Age distribution

Age (in years)	No. of patients	Percentage
10–20	12	4.41
21–30	54	19.85
31–40	104	38.23
41–50	56	20.58
51–60	28	10.29
61–70	14	5.14
71–80	4	1.47

Table 2 Location of abscess and number of patients

Abscess	No. of patients	Percentage
Peri-anal	32	47.05
Parietal	6	8.82
Breast	4	5.88
Gluteal	4	5.88
Para pharyngeal	4	5.88
Peri-urethral	4	5.88
Others	14	20.58

splenic injury, etc. were observed incidentally. Uncommon conditions like external iliac artery occlusion, diaphragmatic eventration, ca-gall bladder, and deep vein thrombosis were also observed. Two were admitted for stoma closure, ileostomy, and colostomy. Indication for these procedures was unknown (Table 4).

Discussion

During our study period, 108,812 patients were admitted and 1792 patients among them were HIV positive (1.64 %). The prevalence of adult HIV was around 31 % in 2009 in India as per NACO fact sheets of March 2012 [1] and is showing a declining trend. A study from Bangladesh, a low prevalence country having <1 % prevalence, reported 109 admissions in a tertiary care specialized hospital during a 5-year study [3]. They quoted that around 7500 patients are living with HIV/AIDS in 2009. The provisional HIV prevalence as per DAC News letter is 0.53 % among ANC Clinic attendees of Karnataka, and Bijapur falls under category A with more than 1 % HIV+ status in ANC attendees [2, 4].

The incidence of surgical diseases among HIV positive patients in our study was 13.65 %. Other studies showed 12.1 % [3] and 16 % [4], and 22.7 % in the UK [5, 6].

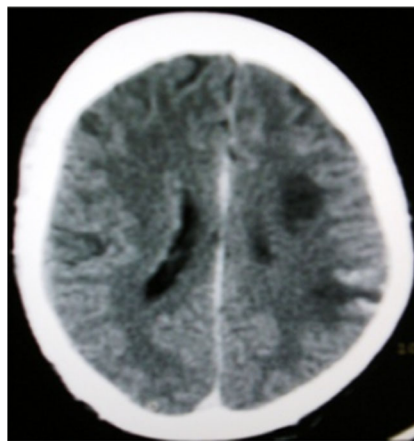


Fig. 1 CT film of brain abscess



Fig. 2 Para pharyngeal abscess forming fistula

In the current study, 184 patients were males and 88 were females and ratio was almost 2:1. The male to female ratio in most studies was 3:1 or 2:1 except in African countries where it is almost equal [4–7].

In the present study, 82 patients (30 %) had anorectal pathology, among them peri-anal abscess, fistula in ano, fissure in ano, and hemorrhoids were 11.7, 5.8, 10.2, and 1.47 %, respectively. Anorectal pathologies are common in HIV+ persons, and about one-third of infected individuals are known to develop anorectal problems in their life time [8, 9].

Twenty patients (7.35 %) had pleural effusion, and most of them were due to bacterial pneumonia. Pneumothorax was found in 12 patients (4.41 %). Afessa et al. [10], in their 599 HIV positive patients, observed that pleural effusion was seen in 14.6 % of patients due to bacterial pneumonia and 1.2 % of them had pneumothorax. Fourteen patients (5.14 %) had appendicitis. Even though appendicitis is reported to be more in HIV+ individuals, there is a wide variability of its incidence across other studies from 16.7 to 0.5 % [11, 12]. Antiretroviral therapy (ART) is known to increase drug-induced pancreatitis [13, 14]. Twelve patients (4.41 %) had pancreatitis, and among them 10 were drug-induced due to ART. Two patients had alcoholic pancreatitis.

Lymphadenopathy is common in HIV patients both non-specific and of tubercular origin. Ten (3.67 %) had lymphadenopathy and six were due to tuberculosis. Tuberculosis is very common in HIV+ patients. The risk of developing some form of tuberculosis in HIV+ people is 26–31 times more compared to non-infected individuals [15]. Tubercular

Table 4 Surgical diseases

Surgical diseases	No. of patients	Percentage
Abscess	68	25
Fissure	28	10.29
Fistula	16	5.88
Pneumothorax	12	4.41
Pleural effusion	20	7.35
Hydrocele	8	2.94
Lymphadenopathy	10	3.67
Abdominal tuberculosis	10	3.67
Appendicitis	14	5.14
Pancreatitis	12	4.41
Head injury	12	4.41
Cellulitis	10	3.67
Others	52	19.11

lymphadenopathy and various forms of abdominal tuberculosis were observed in 3.6 and 2 % of the study population. Similar presentation was observed by others in Indian subcontinent [16, 17]. However, this probably represents only a small fraction of confirmed pathology.

Six of our patients (2.2 %) had ureteric calculi and another six had uncomplicated inguinal herniae. All of them were on ART. It is suggested that indinavir increases the incidence of calculi [18]. ART is also implicated in increased incidence of herniae. It is proposed that since these drugs are protease inhibitors and nucleoside reverse transcriptase inhibitors, they probably induce weakening of the supportive tissues [19].

In this study, out of 272 HIV positive patients, there were few uncommon surgical conditions which were less reported. Two were diagnosed and treated for deep vein thrombosis. There was no history of any surgeries or trauma earlier. Only one study has quoted the presence of DVT so far [20]. Two patients (0.73 %) had carcinoma rectum. Ca rectum is reported to be more aggressive, early in presentation with less favorable outcome [21] (Fig. 3).



Fig. 3 Anorectal malignancy

Table 3 Surgical diseases of tubercular etiology

Surgical diseases of tubercular etiology	Number
Pleural effusion	6
Pneumothorax	6
Abdominal tuberculosis	10
Tubercular cervical adenitis	6
Total	28

Besides these surgical diseases, other unusual surgical conditions observed were external iliac artery occlusion and diaphragmatic eventration, hitherto not reported in the literature. Other incidental surgical diseases observed were primary vaginal hydrocele, carcinoma gall bladder, hypothyroidism, bilateral varicose veins, lipoma over scalp, and malignant melanoma with hepatic metastasis.

Conclusion

With the availability and access to free antiretroviral therapy, the life span of individuals with HIV/AIDS has significantly improved and consequently their chances of developing a variety of surgical problems. Better awareness and non-discriminatory management of these individuals should be the norm. A watchful eye is required to detect and treat common diseases and common surgical conditions hitherto not reported.

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