

Burden of Undiagnosed HIV Cases & Associated Stigma Prevalent In Health Care System Including Mortuary

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Abstract:-

Prevalence of Undiagnosed HIV cases and associated stigma is a great blow to our health care system. Along with posing a great risk to health care worker, this may also lead to reluctant behaviour of health care personnel towards patient. Problem gets more aggravated in context to handling of forensic cases because there is a good deal of concern over the likelihood of becoming infected with HIV by performing necropsies on undiagnosed HIV positive corpses. These cases usually jeopardize the effort taken to combat HIV/AIDS and make health care personnel more anxious towards performing their duty.

Keyword: - Undiagnosed HIV case, Stigma, Health care system, Forensic settings.

Introduction

Though a lot of sentinel surveillance are functional in many country to determine the prevalence of HIV but in spite of this actual prevalence of disease is still unknown to us. It is seen in previous study that even when the absolute prevalence is low, a considerable proportion of undetected HIV cases present in an ED population are acute.^[1] Based on work in an urban academic ED, Christopher J Lindsell et al in 2011 provide prevalence of undiagnosed disease was 0.05% in urban academic and 0.04% in urban community and 0.02% in sub urban community. These undiagnosed cases should be stratifying by age, sex, race/ethnicity, risk behavior and H/o testing. So as suggested by Joseph J Amon in 2014, Epidemiology has provided a critical clue in natural history of HIV infection, prevalence, trends and other risk factors. And all data which can be pooled from epidemiology can be used for evaluation of antiretroviral medicine and assessment of different public health intervention. Other similar study of Milligan C et al in 2014 in a private university and in a community college, they conducted a total of 1408 test and 5 were found positive and these positive cases were new diagnosis. Problem of undiagnosed cases are not only limited to developing and underdeveloped country, the rate of new HIV infections in the UK continues to rise, with one-quarter of cases remain undiagnosed.^[2] Like other William M. Reichmann et al also estimated the prevalence & proportion of HIV that is undiagnosed in population with similar demographic as the

Universal Screening For HIV in emergency room(USHER) Trial and the Brigham and Women's Hospital emergency department in Boston. And he found that the prevalence of undiagnosed HIV was estimated at 0.22% and proportion of HIV-infection that is undiagnosed in this ED-based setting was estimated to be 23.7% (95% CI: 11.6%, 34.9%) of total HIV-infections. So in spite of very low prevalence, these cases can jeopardize the effort to fight against HIV/AIDS because in these situation we never know the exact burden of disease. There is no available vaccine in the market and if any vaccine will be available it should be like OPV which can also provide herd immunity. As currently we are lacking a complete cure of HIV/AIDS, these undiagnosed cases may project a toughest challenge before us in this fight against HIV/AIDS.

Aim

Our main aim is to describe the burden of undiagnosed HIV positive cases & associated stigma prevalent in healthcare system including mortuary. Although Autopsy room is most deadly neglected area in health care system especially in underdeveloped and developing countries like India, very little data is available in this regard. This chapter reviews current status of undiagnosed HIV epidemiology, Prevalence of undiagnosed cases, stigmatized attitude among health care personnel and phobia in handling forensic cases.

Material & Methods

The following sources of information were utilized.

1. PubMed using the terms Undiagnosed HIV cases (173 articles identified of which 11 were relevant), HIV risk during Autopsy, Stigma and Attitude of healthcare personnel (out of them 21 were relevant)
2. Internet search engine (Google Scholar) to identify relevant papers, reports and policy documents. Search terms included Survival of HIV virus in Tropical and Temperate Climate, Undiagnosed HIV cases, health care risk in Necropsy ,HIV risk during Autopsy, immigration and emigration,
3. Selected journals (AIDS, Arch Pathol Lab Med, British Medical Journal, Sexually Transmitted Infections and International Journal of STIs and AIDS) were reviewed by hand or online.
4. Websites of relevant organizations such as the National AIDS Control Organization (NACO), W.H.O., UNAIDS were explored.
5. The abstracts of relevant conferences and medical books related to Natural history of HIV.

Results & Extent of Problem

In a report WHO stated that in 2013, approximately 35 million people are surviving with HIV infection in this world and out of them 2.1 million people have acquired a new infection. This data also include a large proportion of children. According to a report publish by UNAIDS report shows that 19 million of the 35 million people living with HIV today do not know their HIV status. The vast majority of people living with HIV are in developing and underdeveloped countries. Thus HIV epidemic also affects development and economic growth of nations.^[3] While the National AIDS Control Organization estimated that 2.39 million people live with HIV/AIDS in India in 2008–09.^[4] Besides developing countries, some developed country like Russian Federation is also experiencing one of the fastest growing HIV epidemics.^[5]

Declining positivity rate and undiagnosed cases:-Are they either side of same coin?

A lot survey of declining HIV incidence and prevalence has been reported now a day's all over the world but there is not a single survey through which we can estimate the actual burden of undiagnosed disease. In a published report of New York City, they observed a sharp decline in HIV positivity rate but shocked to see that this positivity rate was less than the national average rate. So on careful research, they reached on this conclusion that a large number of cases were undiagnosed.^[6] Same situation was observed in European continent where despite the relative stable HIV incidence, epidemic was growing continuously because of these

undiagnosed cases.^[7] Some country like Nigeria in Western Africa has adopted the HIV self-test to improve HIV testing and to capture these undiagnosed cases as for as possible.^[8] In Indian scenario not much data available but data of Manipur is sufficient to explain the situation, in Manipur there is high prevalence of HIV among people who inject drug but we have very little or no knowledge about prevalence of undiagnosed cases.^[9] We need greater efforts to diagnose these undiagnosed cases in Indian scenario. A study of Paris also demonstrated the presence of these undiagnosed HIV infection in high risk group and because of this regulatory authorities suggested universal.^[10] Many people who are HIV positive are unaware of their infection status. So if we can estimate the burden of these undiagnosed cases, it will be a boon for future treatment plan. It will also help to motivate the people for testing programs.^[11] So it is a matter of great possibility that if the HIV prevalence is too low, it is possible that our mechanism is not sufficient to detect these undiagnosed cases. Detection of undiagnosed HIV infection provides an opportunity not only for transmission reduction and lifesaving treatment strategies but also to reduce stigmatize attitude of health care worker dealing with the infected patient or corpse. But as we know in spite of a lot of awareness programs working in our country, people are still reluctant to perform HIV test due to their stigmatized attitude. Ultimately all this lead to increase number of undiagnosed HIV cases. It was also seen in other study that when they offered a rapid HIV test, a lot of people were found to be reluctant for testing.^[12] There is a large section of people who don't seek medical attention even after a risky sexual intercourse/assault and this attitude often lead to increase no of undiagnosed HIV cases.^[13]

Challenges of undiagnosed disease & Risk to Health Care Worker

Healthcare workers are the first person come in contact with the diseased person in hospital settings and infected corpses in mortuary. Although occupational HIV exposure risk is less but it is a real risk and international agencies can't ignore this. While no one knows about the exact percentage of these undiagnosed cases, if we look towards the guidelines of international agencies, they recommend HIV screening in health-care settings only when the undiagnosed prevalence of HIV is > 0.1 %, or the diagnosed prevalence is > 0.2 %. Counting of occupational HIV exposure starts from 1990 after it drew a lot attention from international agencies and since then 106 cases have been reported.^[14] These undocumented HIV cases never get benefit from the treatment and social rehabilitation programs and are more likely to experience HIV-related morbidity and mortality also pose a great risk to health care worker so identifying them should be a priority of HIV prevention programs.^[15] Similar finding were also observed in other study from the different region of the world and they found that due to

stigmatized attitude and lack of awareness of healthcare personal, this problem remained invisible for a long time.^[16,17] A separate study shows that undiagnosed cases were faces more morbidity and mortality because of unawareness towards their disease status. It is also reported that usual surveillance for HIV/AIDS misses a substantial number of people who remains unreported and undiagnosed.^[18,19]

A Stigmatized Attitude in Health care personnel

The concept of stigma related to HIV is not explicitly defined anywhere, rather literature referred it as a mark of disgrace.^[20] This in turn averts the researcher not only to compare various study design but also restrain in designing the effective programs and interventions.^[21] Other literature also defines that stigma is a deeply discrediting attitude.^[22] HIV/AIDS stigma is considered as a major break in effective planning and execution of HIV prevention and treatment programs. A cross sectional study was designed in 2015 to study the attitude of healthcare personnel by giving them a self-administered questionnaire to assess their knowledge and attitudes toward HIV/AIDS infected. There is a clear evidence of poor knowledge and stigmatizing attitudes of health care workers need further training of health workers.^[23] Despite of knowledge and awareness, which most of health care personnel have regarding HIV/AIDS, it is because of the social stigma, which makes them afraid off, so they are afraid to follow even standard procedures for HIV. In another cross sectional study of south eastern region, they describe factors like education, HIV training, religiosity and workplace stigma have a significant association with the stigmatized attitude of health care personnel.^[24,25] Such reluctant attitudes among health care workers could blunt the execution of policies not only for effective diagnosis and medical treatment of HIV/AIDS but also in performing autopsy in dead corpse. So when stigma manifests in the healthcare setting, people living with HIV receive substandard services or even be denied to care altogether. Stigma associated with HIV has been documented as a barrier for accessing quality health-related services.^[26] Although the consequences of HIV stigma have been documented extensively, but very minimal steps have been taken at present to curtail the stigma associated with it. In some African country where prophylactic treatment has been newly introduced, further averted the health workers to report their occupational injury due to stigma and discrimination from the other fellow workers.^[27,28]

HIV Seropositivity in mortuary:-a phobia during autopsy-

Postmortem room is itself a more infectious place in a hospital premises and it became most dangerous for those healthcare individual who ignore it. There is a good deal of concern among mortuary worker of being infected with HIV during autopsy of cadavers, whose HIV status is not known

to them. Along with this popular layman belief that HIV virus also become noninfectious after death, less knowledge regarding Universal precautions during autopsy make them highly prone to blood borne infections. In mortuary settings infection may arise from contact of infected blood or body fluids and percutaneous injuries from infected bone spicules, scalpel blades, needles (syringe and sewing-up) or from aerosols inhalation etc. Much literature has been published till date showing that HIV virus can remains infectious in human corpses as longer as 2 to 3 week of postmortem period in different environmental conditions.^[29] Post mortem room is a source of potential hazards and risk, post mortem staff has responsibility to make them aware of to minimize these risks. Some literature suggested that liabilities of mortuary workers should be fixed towards themselves, colleagues and visitors to the mortuary but in spite of this many literature has also reported acquired HIV infection to pathologist and other workers during autopsy of the cadavers of unknown sero status.^[30,32] Ideally there is a screening of all the corpses brought to mortuary but in Indian scenario it is very tough as here we are still struggling in providing HIV self-screening to all living individual. Though there are a lot of recommendations regarding Universal precaution during autopsy but the important thing is compliance to follow universal precaution. Serophobia of the human immunodeficiency virus is very noticeable feature in mortuaries. This morbid anxiety in forensic settings has made mortuary workers unduly overcautious so it is very necessary that guidelines should be reasonably simple. Time to time KAP study should be done in health care personnel related necropsy to build their mental strength for handling these deadly infections.

Discussion

Declining general prevalence of HIV, as reported by different HIV surveillances may be as a result of our unawareness towards undiagnosed HIV cases. Usually these surveys resemble tip of Iceberg theory of Ernest Hemingway, focusing on surface element without explicitly discussing underlying hidden disease. These undiagnosed cases pose a great risk to health care personnel especially in scenario related to handling of forensic cases, which is already a most infected place in a hospital premises. Most often such cases create panic and jeopardize all attempts to counter HIV/AIDS. Thus all effect to counter HIV epidemics are goes into veins. Specific interventions and social programs are also developed and rigorously tested to reduce HIV/AIDS stigma. This increase in number of undiagnosed cases may be as a result of stigmatized attitude & reluctant behavior of health care personnel and general public towards HIV testing. HIV testing is the primary gateway to both prevention and treatment services. While provider initiated opt-out testing as recommended by

W.H.O. and UNAIDS is likely to increase the number of people tested, data from some studies indicate that some people may avoid going to the doctor out of fear of testing and women who are tested may be subjected to intimate partner violence^[33, 34]. To overcome this stigmatized attitude. HIV Self-testing is an emerging approach, which is cost effective and empowering to those who may not otherwise test^[35]. Mass-media campaign to discourage HIV/AIDS stigma in general population should be widely implemented in resource-limited countries. Many other theories like social network recruitment have also been applied in some countries to detect these hidden cases^[36]. KAP studies should be performed regularly in all settings to access knowledge, attitude and practical approach of health care personnel. These KAP studies must follow an interactive and evidence based training sessions with the health care personnel to discourage their stigmatized attitude & make them aware regarding possible risk associated with these undiagnosed positive cases.

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