Research on HIV and Pakistani Healthcare

One of the primary goals of the HIV/AIDS Education Project in Pakistan is to equip the healthcare providers of Pakistan with the necessary tools and knowledge to successfully treat and prevent the spread of HIV/AIDS in Pakistan. This PDF contains a growing list of research articles highlighting the current state of Pakistani healthcare in relation to HIV/AIDS.

Maintenance of Anti-Retroviral Therapy (ART) to HIV Patients and their Preventative Practices Against COVID-19 Pandemic - A Syndemic Perspective from a HIV Center in Pakistan

Maroof, Saira, et al. "Maintenance of Anti-Retroviral Therapy (ART) to HIV Patients and their Preventative Practices Against COVID-19 Pandemic - A Syndemic Perspective from a HIV Center in Pakistan." *Pak. Armed Forces Med. J.* 71(5), 1769-1773 (2021). (Link to Full Article)

Abstract

Objective: To see the implementation of designed strategy for uninterrupted supply of HIV treatment at time of COVID-19 pandemic along with the knowledge and preventive practices regarding COVID-19 among HIV positive patients to have baseline data for future interventions to control HIV-COVID-19 syndemic.

Study Design: Cross sectional study.

Place and Duration of Study: The HIV Center at Benazir Bhutto Shaheed Hospital, Karachi Pakistan, from March to May 2020.

Methodology: A total of 100 patients who visited the center for medicines were interviewed. Participants were inquired about the availability of Antiretroviral Therapy (ART) during lockdown, discontinuity in treatment suffered during this pandemic, their preventive behaviour against COVID-19, most adopted prevention and source of information for this behavior.

Results: Among all the participants 72% had achieved viral suppression. As far as multi month dispensing was concerned 10% received ART for one month, 64% for 2 months and 18% for 3 months as per the strategy devised by Pakistan AIDS control in collaboration with UNAIDS. Out of total only 11% developed symptoms but later on tested negative on PCR test. Most commonly adopted personal protection adopted was

face mask among 68% participants followed by hand washing and social distancing. All the participants were of the opinion that they received sufficient information regarding COVID-19, its prevention and mode of spread. The source of information was TV 60%, HIV center 30% and both TV and HIV center 10%.
Conclusion: It was found that all the patients got uninterrupted supply of anti-retroviral medicines. Despite sufficient knowledge regarding the disease they could not comply with prevention fully because of their occupational requirements.

Prevalence of Blood-Borne Viruses in Health Care Workers of a Northern District in Pakistan: Risk Factors and Preventive Behaviors

Khan, Muhammad Zubair, et al. "Prevalence of Blood-Borne Viruses in Health Care Workers of a Northern District in Pakistan: Risk Factors and Preventive Behaviors." *Can. J. Infect. Dis. Med. Microbiol.* 2016, 2393942 (2016). (Link to Full Article)

Abstract
Background: Blood-borne viral infections like viral hepatitis are highly prevalent in Pakistan. There is also a potential threat of human immunodeficiency virus (HIV) spread in the country. Health care workers (HCWs) are a high risk population for acquiring such viral infections and potential spread to the patients.This study aimed to determine the frequency of three blood-borne viruses: HCV, HBV, and HIV in HCWs of district Malakand in northern Khyber Pakhtunkhwa (KPK) province of Pakistan. Moreover, risk factors and preventive behaviors among HCWs were investigated in detail.
Materials and Methods: Prevalence was investigated using serological assays followed by real time polymerase chain reaction (RT-PCR) based characterization. A total of 626 health care workers working at 17 different health care units, belonging to 6 different job categories, were included in this study.
Results: HIV was not detected in the HCWs while rate of prevalence of HCV and HBV was far less (0.8 % and 0.64 %, resp.) as compared to general population (4.7%–38%). The majority of HCWs were aware of the mode of spread of these viruses and associated risk factors. Needle stick injury was found to be the most important risk factor for possible acquisition of these infections.

Is Universal Screening of Individuals for HBV, HCV and HIV before Endoscopy Justified? An Audit of the Current Practices

Mehr, Muhammad Tariq, et al. "Is universal screening of individuals for HBV, HCV and HIV before endoscopy justified? An audit of the current practices." *J. Med. Sci.* 23(2), 100–104 (2015). (Link to Full Article)

Abstract

Objective: To find out the current practices of sterilization and decontamination of endoscopy equipment, and to compare them with the current practical guidelines in rest of the world.
Material and Methods: This was a retrospective study carried out from January 2014 to December 2014 in the Departments of Medicine HMC, KTH, Peshawar. All the patients scheduled for endoscopy are screened for any evidence of Hepatitis B Virus (HBV), Hepatitis C Virus (HCV) and Human Immunodeficiency Virus (HIV) by third generation ELISA test. The approximate cost of these screening tests from the hospital main laboratory is Rs 650 and it is between Rs 900 to 3000 from the outside private laboratory facilities. The endoscope is soaked in a decontaminant solution for 30 mins in the morning before the start of the procedures. The endoscope is the washed with water and air dried. In between the procedures, the endoscope is wiped cleaned with a gauze piece soaked in saline and then introduced in another patient.
Results: As all the patients are screened for any evidence of HBV, HCV and HIV, it is presumed that the iatrogenic infection due to endoscope would be negligible. Universal screening for the evidence of these infections comes at average Rs 1000 per patient as compared to Rs 35 for the endoscope cleaning with the cleansing and rinsing of all the channels of the endoscope with 2% glutaraldehyde solution (Cidex, Johnson and Johnson Medical Inc., Arlington, TX) for 15 minutes through automated Endodisinfector followed by rinsing the channels with water and later purging with air.
Conclusion: Timely intervention in terms of Endodisinfection and appropriate training of the staff in sterilization and disinfection of the endoscopes as per international guidelines is suggested before it becomes a human rights issue

Knowledge Practice Gaps about Needle Stick Injuries among Healthcare Workers at Tertiary Care Hospitals of Pakistan

Kumar, Ameet, et al. “Knowledge practice gaps about needle stick injuries among healthcare workers at tertiary care hospitals of Pakistan.” *J. Ayub Med. Coll.* 24(3-4), 50-52 (2012). (Link to Full Article)

Abstract
Background: The aim of our study were to assess the knowledge and practice gaps about Needle Stick Injuries (NSIs) and their associated factors among Health Care Workers’ (HCWs) at tertiary care hospitals of Pakistan.
Methods: A cross-sectional study was conducted in two tertiary care teaching hospitals in Karachi, Pakistan, representing both private and public health sector. During the months of January to May 2008, trained medical graduates interviewed 497 HCWs (Doctors and Nurses) who were working in those particular hospitals for more than a year and were willing to participate in the study.
Results: Overall the knowledge about transmission of HBV HCV and HIV was good. However,
19.1 and 12.3% HCWs had misconception about the transmission of malaria and tuberculosis by NSIs; more female and working as a nurse. Furthermore, a large number of participants had lack of knowledge for the transmission of infectious mononucleosis. Over two third of study subjects were not vaccinated for hepatitis B infection, again more females ($p=0.002$) and nurses ($p<0.001$). Large numbers of study participants were not wearing protective cloths, and do not us sharp containers. Similarly,

preponderance of study subjects does not avoid breaking needle by hands and leave syringes open; these poor practices are significantly more prevalent among those working for more than five years and doctors (p=0.003).
Conclusion: In addition to lack of knowledge, poor practices were reported in this study. Proper curriculum reform and training are required to protect the health Care workers and patients. Further research and interventions are suggested in this regards.

The Frequency of HBV, HCV and HIV in Patients Undergoing Percutaneous Mitral Valvuloplasty

Ashraf, Tariq, et al. "The frequency of HBV, HCV and HIV in patients undergoing percutaneous mitral valvuloplasty." *Pak. Heart J.* 38(1-2), 3-7 (2005). (Link to Full Article)

Abstract
Objective: Determine the frequency of Hepatitis B, C and HIV in patients undergoing mitral valvuloplasty with multi-track balloon catheters.
Methods: This was a cross sectional study in which 100 consecutive patients of both sexes underwent percutaneous Mitral Valvuloplasty with multi track balloons catheters at the National Institute of Cardiovascular Diseases Karachi from January 2003 to December, 2004. The Viral markers of Hepatitis B Surface Antigen & Antibodies against Hepatitis C & HIV was done in all patients undergoing PTMC prior to procedure.
Results: Out of 100 patients undergoing PTMC with multi track balloon catheters, 78 patients were females while 22 of them were males. Screening of these patients showed that 14% of them were Sero positive for HBV while 8% positive for HCV. None of screened patients were HIV positive.
Conclusion: 1) The frequency of hepatitis B, C and HIV in patients undergoing PTMC (14% & 8%), as compared to normal population (2.56% for HBsAg) & (5.31% for anti-HCV) respectively.
2) In our country most of patients are non-affording and we have to reuse balloon catheters, so it should be mandatory to screen hepatitis B, C and HIV before undergoing invasive procedures. Balloon used in seropositive patients should be discarded.
3) National guidelines regarding reuse of various hardwire and other preventive measures are mandatory for patient's safety.