

HIV Transmission through Tattoos

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Abstract

HIV transmission through Tattooing is not a common mode of transmission. Tattooing becomes fashion and popular among youngsters throughout the world. A 26 year old man without any history of sexual activities, blood transfusion and IV drug abuse, acquired HIV through tattooing is being reported. Younger generation should be educated and made aware about the risk of transmission of blood-borne diseases is emphasized.

Keywords: HIV transmission; Tattoo

Introduction

HIV is known to be transmitted through sexual activities, transfusion of blood and blood products, sharing of needles (IV Drug users) and Mother to child transmission (MTCT) [1,2]. As per Center for disease control, Atlanta, USA, any activity other than these four routes carry negligible risk for HIV transmission [3]. Tattooing and piercing becomes fashion worldwide among both men and women at any age after adolescence [4]. When it is not done with proper care, it can transmit HIV infection and other blood-borne diseases as sharp needles are being involved piercing the skin of the individuals. Transmission of HIV and other blood born infections through tattooing, mass shaving of heads and through barber shops also have to be given adequate emphasize as modes of HIV transmission in future. To increase the awareness about this risk involved in tattooing and to stress the safety measures this case is reported.

Case Presentation

26 year old unmarried individual referred to my OPD for the complaints of sore mouth, passing frequent loose stools and extreme weakness for a week duration, after he was found HIV positive. He came with a HIV 1 positive report with a rapid card test and a Western Blot test. He denied both heterosexual and homosexual sexual activities. There was no history of blood transfusion or IV drug use. He admitted his passion for tattooing on his body.

On examination, patient was dehydrated. Few aphthous ulcers were present over the lips, ventral aspect of tongue near frenulum and its sides. He was having a sick look due exhaustion. Patient was having 8 tattoo marks on his arm, fore arm, back and chest. He had these tattoos at 3 different spells of time (10 years back, 5 years back and 3 years back). He was admitted in the hospital for the diarrheal episode and the same was corrected. During May, 2016, his absolute lymphocyte count was 596 cells/ cubic mm. His CD4 count was 27 cells/cubic mm. with a CD4 percentage of 4%. The ratio between CD4:CD8 was 0.07 with a viral load of 43717 copies/ml. His weight was 54 kg. ART was initiated with Tenofovir, Lamivudine and Efavirenz combination. He improved markedly within a year. His CD4 Count on May, 2017 was 284 cells / cu.mm, with an absolute lymphocyte count as 3361 cells/cu.mm. His CD4 percentage raised to 23% and the CD4:CD8 ratio was 0.49. His viral load was 7124 copies/ml. This time his weight was 70 kg. He is now active and doing his job comfortably [5-9] (Figures 1-3).

Discussion

Transmission of Hepatitis B and C through unsafe tattooing practices was well established whereas the evidence is less clear when it comes to HIV is concerned. Doll reported two cases of HIV infection in US likely to have been acquired by tattooing within prison.

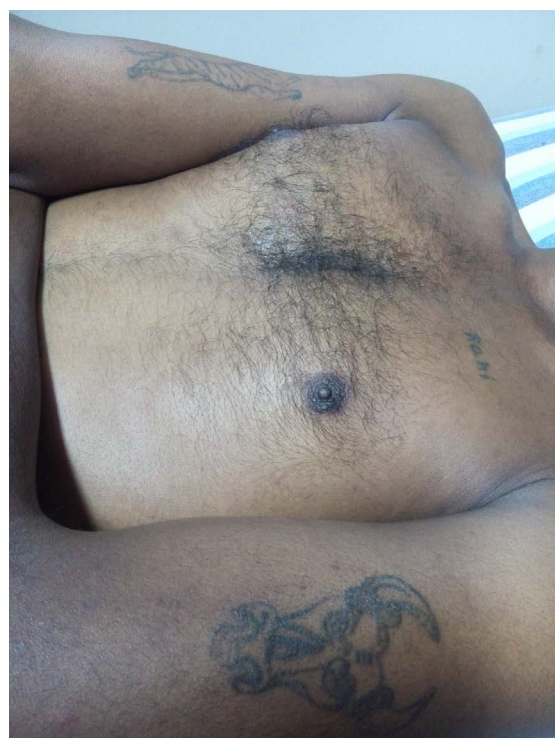


Figure 1: HIV transmission through tattoo 1.

Transmission of diseases from tattooing may be related to the use of needles that were contaminated with blood from a previously tattooed individual, or the use of contaminated dyes and other material, such as sponges or tissues used to wipe away blood. HIV has been shown to remain infectious in aqueous solutions at room temperature for up to fifteen days and pigmented solutions, because they are relatively inert. A single needle stick injury from an infected host carries with it a 5-30% risk of transmission of hepatitis B (HBV), a 3-7% risk of transmission of hepatitis C (HCV), and a 0.2-0.4% risk of transmission of HIV. As

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Received July 25, 2017; Accepted July 31, 2017; Published September 07, 2017

Citation: Sankaranantham M (2017) HIV Transmission through Tattoos. HIV Curr Res 2: 124. doi: 10.4172/2572-0805.1000124

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Figure 2: HIV transmission through tattoo 2.

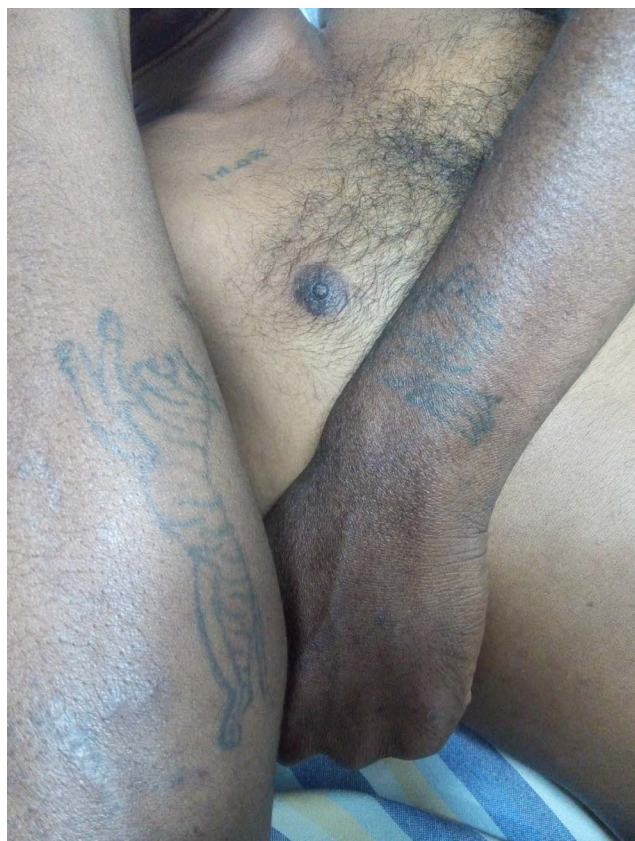


Figure 3: HIV transmission through tattoo 3.

this patient vehemently denied any history of homo or heterosexual activities, blood transfusion and Intravenous drug abuse, there is higher possibility for him to acquire HIV through tattooing, when other common modes of transmission were absent. In this case, he had three episodes of tattooing. In my opinion the first episode would have been the source of infection (10 years back) as the CD4 count was very low when patient was seen first.

Conclusion

Though the chances of HIV transmission through tattoo is much less compared to other transfusion transmitted diseases, it cannot be neglected totally. Adolescents and young adults should be adequately educated about the risk in going for tattoos. There must be strict protocols to be framed by the experts in the field of preventive medicine and those should be implemented and to be followed by the tattoo professionals to avoid such hazards in future.

References

1. Braithwaite R, Robillard A, Woodring T, Stephens T, Arriola KJ (2001) Tattooing and body piercing among adolescent detainees: Relationship to alcohol and other drug use. *Journal of Substance Abuse* 13: 5-16.
2. Nishioka SA, Gyorkos TW (2009) Tattoos as risk factors for transfusion transmitted diseases. *Int J Infect Dis* 5: 27-34.
3. Messahel A, Musgrove B (2009) Infective complications of tattooing and skin piercing. *J Infect Public Health* 2: 7-13.
4. Garland SM, Ung L, Vujovic OV, Said JM (2006) Cosmetic tattooing: A potential transmission route for HIV? *Aust N Z J Obstet Gynaecol* 46: 458-9.
5. Doll DC (1988) Tattooing in prison and HIV infection. *Lancet* 331: 66-7.
6. Rapid Response Service (2012) HIV risks associated with tattooing, piercing, scarification and acupuncture. HIV Treatment Network, Toronto, Ontario.
7. Resnick L, Veren K, Salahuddin SZ, Tondreau S, Markham PD (1986) Stability and inactivation of HTLV-III/LAV under clinical and laboratory environments. *JAMA* 255: 1887-91.
8. Beltrami E, Williams I, Shapiro C, Chamberland M (2000) Risk and management of blood borne infections in health care workers. *Clinical Microbiology Reviews* 13: 385- 407.
9. National Institute for Occupational Safety and Health Alert (1999) Preventing needle stick injuries in health care settings. United States Department of Health and Human Services, Centre for Disease Control and Prevention, Ohio, USA.