



Degree of adherence to the use of hand gloves in the investigative Departments of Tripura Medical College, Hapania, and Agartala.

KEYWORDS

Hand gloves, universal precautions, safety, Collection, Processing.

Dr. NILOTPAL BANERJEE

Associate Professor of Microbiology, Tripura Medical College & Dr. BRAM Teaching Hospital, Hapania, Agartala. Tripura state

ABSTRACT

Background: Adherence to gloves in the investigative departments was the focus as long study on single parameter may be rare in any institution where medical, Zoonotic matters are dealt with. **Materials and Methods:** Samples were regularly observed while collection, reception and processing. **Questionnaire and interrogative methods** were recorded and evaluated to draw opinion, conclusion. **Results:** 23% were seen using gloves. Among users, 76% were female and 18% were males seen practising. 92% staff opined that they had not suffered for non use. **Conclusion:** The safety practice like gloves may be popular by evaluation scoring as knowledge does not seem enough for transformation. Evaluation scoring may act as stimulant to adhere to one of the most important step towards safety.

INTRODUCTION: The hazards of not using the hand gloves cannot be overemphasized today in the era of HBV, HIV, and HBC etc 2, 8 faced by community. The study was undertaken to assess the knowledge, attitude and practice in the most important step among the blood and body fluid precautions aimed at safety of handlers. As these departments are located near but away from the hospital building, the staffs are not alert and aware to practice in a systematic manner. It has been a belief and callousness not to use the hand gloves though the Microbiology, pathology and Biochemistry Departments have been receiving the infectious hospital specimens on everyday basis. As these departments have not been seeing patients, the gravity of the infectiousness of the specimens is not much realised, so, lack of culture towards use of gloves. This protection may not be full proof but certainly decrease the chance of infectious, being a barrier between the specimen and care provider groups by way of volume of blood etc.

STUDY METHODS: - The study of 50 appointed Medical Laboratory Technicians was undertaken by observation, interrogation followed by filling up of questionnaire on pertinent knowledge and practice to assess the attitude grown from the angle of infectiousness of clinical specimens. The study undertaken was for five years from 2011 to 2015 in the investigative departments of Tripura Medical College except Radiology where blood and body fluid sample is not a feature.

ANALYSIS AND INTERPRETATION:- On an average, daily 300 to 400 blood samples are collected by the Medical Laboratory Technician. The study was made on laboratory technician of the investigative department dealing with blood & body fluid. So, IPD collection by nursing staff was not included in the study. It was found that 23 % of technical staff under study, were used to the glove safety practice. 70% of attending staff opined that the risks were felt negligible. When explained on the risks involved on contact with intact skin and non-intact skin, 2,8 the care group admitted the risk taken. But, after discussions, the improvement was recorded among female staff, particularly married lot where as the male staff improved in the tune of 9%. 92% staff opined that they have not suffered after working hours and years except one who had needle stick injury. The staff became complacent to the practice of non use of gloves. The evaluation study based on questionnaire during sensitisation and CME programme revealed that 81% answered correctly in the post-evaluation.

19% answered in confused manner and were explained in the form of remedial teaching. The questionnaire was not changed in the pre and post evaluation. The correctness of the answers was announced by way of score that evoked joy as, certificates were issued too. The participation as well as performance report are of the in-service trainee, have motivated the group to perform better on six monthly basis as evident on the results of performance. The group of staff were happy with the knowledge. However, most staff did not seem to translate the knowledge into practice. On interrogation, it was revealed that gloves were not regularly available in sufficient number but any cut on finger was covered with sterile tape after the major blood transmitted viral infections 8 were understood. 41% were vaccinated against Hepatitis B. 19% of the staff opined that they got used to non-use and also 2/3 pairs of gloves would be required for the business hour and needs change over. 18% were of the view that the artificial layer of protection is unusual, in-convenient and also time taking. 12% of staff were of the view that there was no visible blood in many specimens and so they opted for non-use of gloves. It shows that they would only be inclined to use if they had seen blood with the specimens. Interestingly, 100% of staff were on gloves on the day of inspection. It was also observed that during change over of rotational duty, the gloves were thrown near the bucket or in the corner in hurry. Neglect on such vital issue have become a custom & practice there by undermining the self-safety, family safety, patient safety for callousness on the part of the attending staff. Interesting to note that the cleaning attendants were observed on 100% of gloves safety though they were only advised on entry and did not undergo any training programme.

One page questionnaire that was supplied was as below:- (Put tick where necessary)

Time-20 Minutes

DISCUSSION : Dr Mandira Varma and Geeta Mehta in a study among medical students reported 35.5% having used gloves and 61% sustained injury 3. The study reveals that risks involved are realised but the attitude has been lacking on practice. According to our study, the female group was practising gloves safety much better. Most of the male group of staff were more callous on glove safety as they said that hardly anyone suffered as consequence of non use of gloves. It is also tallying with more inclination of the male staff on habit formation even after knowing the consequences. So, it is evident from the study

that knowledge may not change in positive way and grow into attitude for practice as many things are not followed unless suffered though knowledge and other resources may Co-exist adequately. Basic level of education or even higher education may not be enough to transform any individual. According to the author 1, "Apathy is like the movement of the skin of the buffalo when thrown a stone, neither tends to move from the lack nor casts a look "

Name..... Age.....
Sex.....
Designation.....
.....
Department.....

Questions:**Answers**

1) Why do use gloves ? Self safety, Patient safety,
 Colleagues safety, all above.

2) What major viral diseases can be transmitted by contact with blood?

Hepatitis B, Hepatitis C,
 HIV, all above.

3) Which is most infectious and why ?

4) Gloves are made up of – Plastic, Latex, both.

5) What is an Incubation period?

6) Is the disease detectable during above period? Yes/No

7) Can the staff be infected during above period? Yes/No

8) What would you do in an injury on skin during work?

9) How gloves are taken care if re-used?

10) What is wicking?

11) Where would you dispose off gloves?

12) Do you disinfect gloves or incinerate?

13) How many types of gloves you know of?

14) Are you vaccinated against Hepatitis B Yes/No.

SUGGESTION: The basic safety measures of covering routes can take shape by way of Microbiology awareness programme, would prove invaluable. This programme can be planned covering the staff of all the investigative departments who are primarily handlers during the entire process from reception to processing. It would allay transmission, prevent the spread of cross-infection and check suffering including cost, in a populous country like India and all poor nations. NACO's standard operating procedure to the need for in the manual refers great care that must be taken in handling during collection, transportation, processing of infectious natural and where there is possibility of exposure to blood or other body fluids. Protocol for gloves-standard and utility have also been recommended by NACO 2 Dr. P.Chakraborty and Nishith pal refers to the use gloves for touching specimens mucous

membranes, non-intact skin of all patients.....7. Hospital-Acquired Infection has been mostly highlighted in relation to patient safety but not many reports exist on glove safety attached to Para-medicals of investigative departments. Zoonotic Microbiology and glove safety has been highlighted in relation to handling and investigative processing of animal specimens 6 . This would protect against many emerging diseases in today's scenario.

Microbiology deals with infectious samples more than any other investigative departments. So, sampling, labelling, transport, processing of each sample, storage 4,5 etc are all associated with risk. So the glove safety needs no further emphasis. Processing 4,9 means handling, macroscopy, microscopy, culture, isolation, anti-bio-gram, identification of pathogen and disposal safety. In the process of culture, the infective cause is allowed to grow, multiply aimed at isolation, identification. So all these steps bear amplification of the cause of infection. So, serious, meticulous, systematic steps which for obvious reason must be tagged with self safety in particular. Any breach in the process can be disastrous.

CONCLUSION: The hand gloves are the most important step towards safety. Any health provider institution would act healthfully if the practice is made mandatory for relevant workers. The system alone can bring not only safety but also be a motivating factor for others to follow. Other steps of universal precautions have already turned to system in most institutions, to curb prevent infection and recycling as per Bio-medical rules and guidelines on handling infectious wastes⁸. But, chance of infection always exist during collection as well as processing of samples, as a patient with fever or no fever may suffer from incurable killer disease or may be a carrier for which he may not have come to the hospital today. If syringe can be cheap, gloves too may be considered likewise by the commercial agencies of the countries from the point of view of cost and adequate supply for availability and use.

REFERENCES

1. Nilotpal Banerjee, AIDS in Indian Society, (1995), P-0.
2. Hospital Associated Infection –Manual SOP, NACO (1999), P-2, 32 and 37.
3. Mandira Varma, Geeta Mehta, (2000) Needle stick Injuries, JIMA, 98, 436-38.
4. Vandepitte, Eng back J, Rohner K, et al. Basic Laboratory Procedures in clinical Bacteriology. 2nd edn, Geneva; WHO (2003): p-3.
5. Laboratory Biosafety Manual (2004) World Health Organization: 3rd edition.
6. CD Alert, NICD (2005), Biosafety and Biosecurity in Public Health Laboratories, P-3,9.
7. Chakraborty & Pal, Manual of Practical Microbiology and Parasitology, IST edition, (2008), Personal care, p-2.
8. Manual for handling Bio- Medical waste, Tripura State Pollution control Board, (2010) E 15,51,52.
9. Behaviour and work in a microbiological laboratory. Chapter 2.4 (tktamop.elte.hu/online-tananyagok/...microbiology/ch01s04.html) accessed on January 2016.