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AIM

To identify the incidence of Central Sterile Service Department workers exposure to biological material during reusable medical devices (RMD) cleaning, profile the accidents and victims, and establish the factors associated with accidents with biological material during RMD cleaning.

METHODS

Cross-sectional analytical study. Data collection was performed from January to June 2019, through the Brazilian records of compulsory notification of accidents with biological material, from the Occupational Health Reference Center, located in the Midwest region of Brazil. The study population was CSSD workers who reported accidents with biological material from January 2006 to December 2018. Data were analyzed using the R-3.6.1 program for windows. Descriptive statistics was used to estimate the chance (odds ratio - OR) of percutaneous accidents during RMD cleaning. Confidence interval of 95% and $p < 0.05$ were considered for the univariate analysis.

RESULTS

A total of 10,674 accidents with biological material were reported, of which 524 occurred during RMD cleaning (4.9%). The nursing team was the group with the largest number of accidents (n=324; 68.9%). For this group, percutaneous exposure was predominant (n=445; 84.9%), with needles (n=127; 28.5%), slides/lancets (n=82; 18.4%), glassware (n=26; 5.8%), and others.

Blood and blood fluids were the biological material involved in 350 (66.8%) cases. Most of the victims were vaccinated for HVB (n=453; 86.4%). Regarding the Anti-HBs, 121 workers (23.0%) had no protection against HBV. The source-patient was known in 137 (33.8%) cases only. At the time of the accidents, 364 (69.4%) were not using all the personal protective equipment recommended (Figure 1). The chance of percutaneous and mucosa accident during RMD cleaning was 1.34 and 0.62 ($P=0.0221$ and $P=0.0017$; 95% CI), respectively, when compared to other procedures.

The risk of accident with lumened needle ($P<0.01$), glassware ($P<0.01$), blades ($P<0.01$) and others ($P<0.01$), which included handling of surgical instruments such as artery forceps, were also higher during RMD cleaning. Female workers were more likely to be injured ($P<0,01$).

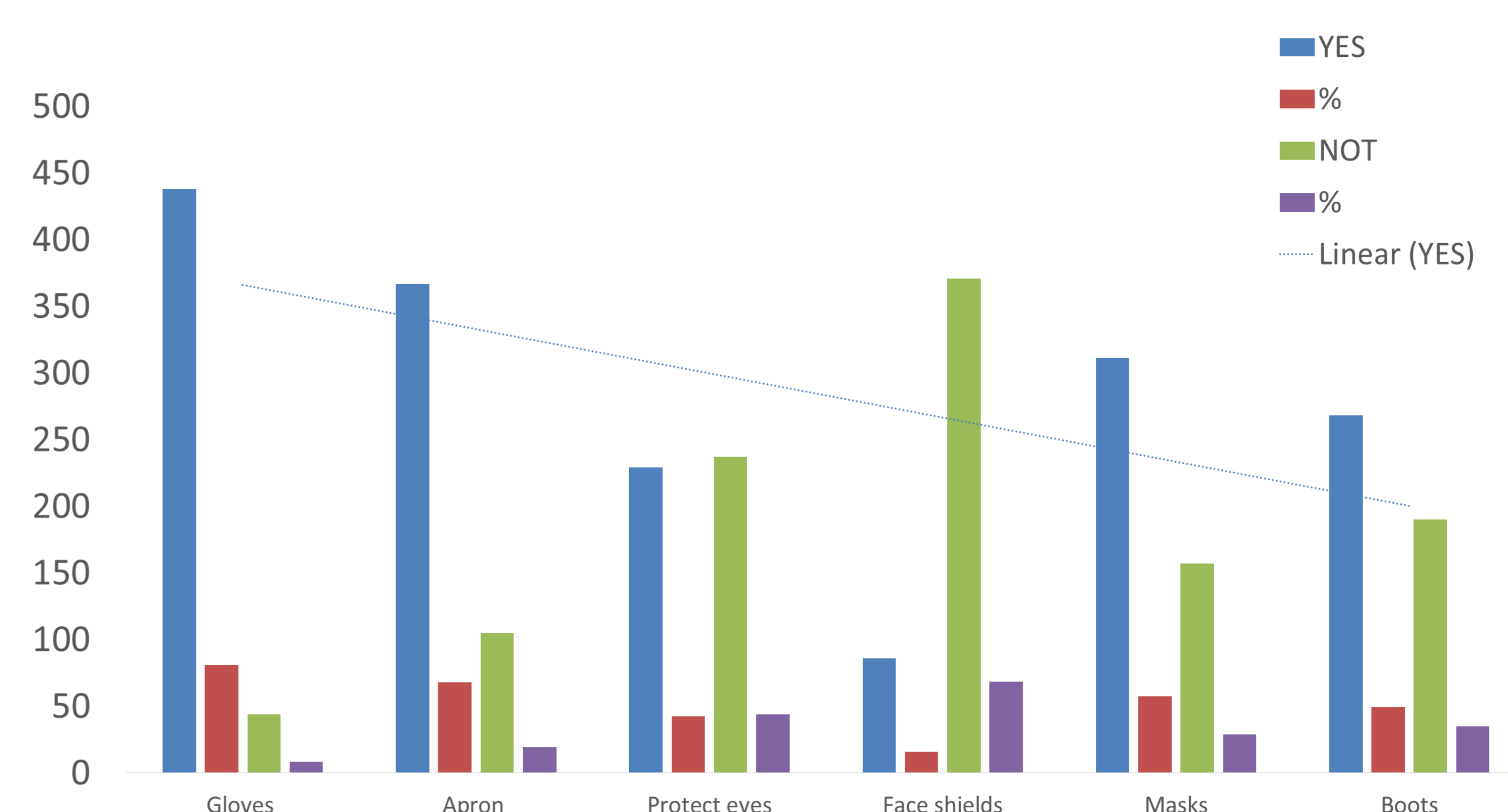


Figure 1. Personal protective equipment use during exposure to biological material during reusable medical devices (RMD) cleaning.

CONCLUSION

The RMDS cleaning step showed to be a critical moment for the CSSD workers' safety and health, as the findings of this study pointed to the high risk of accidents with biological involving blood and percutaneous material. These characteristics qualify the severity of these exposures and the chances of illness for the victims, as it may result in the transmission of pathogens of epidemiological importance.

In addition, it is worthy to highlight the low adherence to protective barriers by the workers, as most of them did not have the recommended personal protective equipment. Overall, this study evidenced the importance of basic actions for prevention and control of exposures to biological material, such as continuous and permanent workers.

References

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