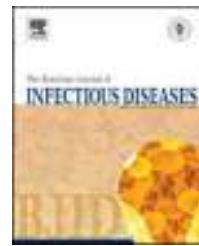




The Brazilian Journal of INFECTIOUS DISEASES

www.elsevier.com/locate/bjid



Letter to the Editor

Brazilian manicure: a potential dangerous behavior



Dear Editor,

Hepatitis C virus (HCV) is a public health issue that affects about 150 million people worldwide. Transmission most commonly occurs through sharing of injection equipment for injecting drug use, transfusion of unscreened blood and blood products, and reuse or inadequate sterilization of medical equipment, such as syringes and needles.¹ Surprisingly, under these circumstances, it is customary and a cultural phenomenon in Brazil to visit beauty salons and remove the cuticles of the nails in the hands and feet.² Manicurists have little knowledge about transmission routes and prevention of infectious agents, despite the underlying risk from an invasive procedure which involves handling of biological material.³

We conducted an observational study, at the University Hospital of the Federal University in Salvador, Bahia, from 2010 to 2014, including 95 individuals with hepatitis C on a waiting list for liver transplantation, with the objective of determining the proportion of these subjects aware of their status who had shared sharp objects when receiving the service of a manicure, which is considered a risk behavior for infection. Median age was 57.9 years and the majority were men (81%) who were married or in a stable relationship. The subjects knew about their viral status and were asked whether they were using or had used someone else's manicure equipment; 55.3% gave a positive reply (Fig. 1).

This study found that more than half of the participants, at some point in their lives had shared manicure equipment, including after knowing about their viral infection status. This behavior may be due to belief that correct sterilization by beauty salons reduces the risk of transmission. Manicures can generate trauma or microtrauma on the skin surface, incurring an elevated risk of infection when blades or nail scissors are shared, without proper sterilization, with an asymptomatic infected family member who visits a barbershop or beauty salon.⁴

This scenario may be more serious if we consider previous studies conducted in Brazil that showed a low risk perception of contamination and few biosecurity precautions for manicures and pedicures. In a study with 100 professionals in the Southeastern region of Brazil, the majority (54%) related that they did not perform any procedures when in contact with customer's biological material, 80% declared that they did not use gloves, 85% did not know how the transmission

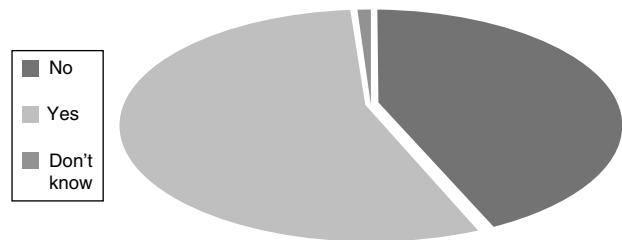


Fig. 1 – Distribution of shared use of manicure equipment among patients diagnosed with HCV in the municipality of Salvador, 2010–2014.

occurs, and 95% did not know how to prevent it.³ Therefore, the low level of knowledge about transmission routes, prevention, biosafety, basic care, and risk perception elevates the risk of viral hepatitis infection.²

The hepatitis C virus infection can be minimized by changes in behavior, educational interventions, such as information materials and health education in beauty salons.⁵ It is also recommended to use one's own equipment for procedures done in beauty salons in order to prevent contamination. Given the risks to which customers and salon professionals are exposed through the shared use of manicure equipment, there is a need to focus increasing knowledge about modes of transmission of the virus and its prevention. Moreover, public health authorities must ensure oversight of commercial establishments.

Funding statement

This project was partially supported by the National Council of Technological and Scientific Development (CNPq): [474869/2010-5] – Edital Universal MCT/CNPq14/2010. Another part of the funding (totaling 100% with the funding above) was supported by the scholarships from the Coordination for the Improvement of Higher Level Personnel (CAPES). The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Conflicts of interest

The authors declare no conflicts of interest.

Acknowledgements

The authors thank all the patients who agreed to be included in this study for their cooperation. We are also grateful to Adriana Dantas-Duarte, Raymundo Paraná, Maria Izabel Schinoni, Paulo Lisboa Bittencourt, Liana Codes, Maria Auxiliadora Evangelista, Alessandra Castro and Graham Thomas Jonh Hearn for their technical assistance.

REFERENCES

1. World Health Organization. Hepatitis C. Geneva: WHO; 2015 <http://www.who.int/mediacentre/factsheets/fs164/en/> [accessed 10.07.15].
 2. Oliveira ACDSD, Costa e Silva AM, Scota S, Focaccia R. Study of Hepatitis B and C prevalence and adherence to standards of biosecurity on manicures and/or pedicures on Brazil. *BMC Proc.* 2011;5 Suppl. 6:220.
 3. Oliveira AC, Focaccia R. Survey of hepatitis B and C infection control: procedures at manicure and pedicure facilities in São Paulo, Brazil. *Braz J Infect Dis.* 2010;14:502–7.
 4. Oliveira-Filho AB, Pimenta AS, Rojas MF, et al. Likely transmission of hepatitis C virus through sharing of cutting and perforating instruments in blood donors in the State of Para, Northern Brazil. *Cad Saúde Pública.* 2010;26:837–44.
 5. Lux L, Marshall J, Parker S, Collard S, Rogers B, Fuson S. Do educational interventions targeted to nail salon workers and customers improve infection control practices in these salons? *J Am Podiatr Med Assoc.* 2014;104:174–6.
- Ana Paula Jesus-Nunes ^a, Tayne Miranda Moreira ^b,
Mychelle Morais-de-Jesus ^a, Lucas Araujo-de-Freitas ^a,
Lucas C. Quarantini ^{a,c,*}
- ^a Programa de Pós-graduação em Medicina e Saúde, Faculdade de Medicina da Universidade Federal da Bahia, Salvador, BA, Brazil
- ^b Faculdade de Medicina da Universidade Federal da Bahia, Salvador, BA, Brazil
- ^c Hospital Universitário e Departamento de Neurociências e Saúde Mental da Faculdade de Medicina da Bahia, Universidade Federal da Bahia, Salvador, BA, Brazil
- * Corresponding author at: Hospital Universitário Professor Edgard Santos, Serviço de Psiquiatria, 3º andar Rua Augusto Viana S/N, 40110-909 Salvador, BA, Brazil.
E-mail address: lcq@ufba.br (L.C. Quarantini).

Received 11 September 2015

Accepted 30 September 2015

Available online 28 November 2015

1413-8670/© 2015 Elsevier Editora Ltda. All rights reserved.

<http://dx.doi.org/10.1016/j.bjid.2015.09.012>