ORIGINAL ARTICLE

HEPATITIS C AT WORK PLACE: A SURVEY OF OCCUPATIONAL HEALTH AND SAFETY KNOWLEDGE AND PRACTICE IN BEAUTY THERAPY INDUSTRY

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ABSTRACT

Background: Exposure to and transmission of hepatitis C raises concern for those occupations where there is possible exposure to blood and blood products, e.g. health care workers, tattooists, hair dressers and beauty therapists. This study was conducted to examine the current knowledge and practice of occupational health & safety regarding hepatitis C in beauty therapy clinics.

Material & Methods: This survey was carried out in Peshawar Cantonment and Town-III during November 2007. A questionnaire was designed to assess the knowledge, and practice of occupational health and safety regarding hepatitis C in beauty therapy clinics.

Results: Eighty percent of the procedures carried out by beauty therapists in one week were reported to have led to exposure to blood. 58.8% of respondent had no knowledge about occupational health & safety practices related to blood spills and blood to blood contact. 66% of respondent had no knowledge about occupational health & safety practices regarding hepatitis C. Knowledge of hepatitis C and its transmission was poor; 53% respondents incorrectly identified sneezing, coughing (53%), hugging (35%), kissing (71%), sharing tea cups and water glasses (76%) as modes of transmission.

Conclusion: Beauty therapy practices can expose both client and operator to blood and is therefore a potential site for transmission of blood borne diseases including hepatitis C. Occupational health & safety knowledge is inadequate and knowledge of hepatitis C especially its mode of transmission is poor.

KEY WORDS: Hepatitis C, Beauty therapy practice, Occupational health.

INTRODUCTION

Hepatitis C is a global health problem. Approximately 3% (170 million) of the world's population is infected with hepatitis C virus (HCV).[1-4] In South Asia, its seroprevalence ranges from 1% to more than 12%.[3,5]

Exposure to HCV raises concern for those occupations where there is possible exposure to blood and blood products. Health care workers, tattooists, hair dressers and beauty therapists are often exposed to blood during work.[2,6,7]

Occupational transmission for HCV is important because of its relatively high seroconversion rate. Seroconversion from needle stick injuries is 10 times as compared to HIV/AIDS.[8] Based on finding about transmission through barber shops, body piercing and tattooing, the potential for transmission of hepatitis C is through blood, percutaneous injuries, non-intact skin or eye splash. Contacts such as sharing tooth brushes, nail clippers and razor blades are also risk factors for HCV transmission.[9-12]

Non-implementation of Occupational Health and Safety (OH&S) practices in beauty therapy business is well documented.[13,14] The problem is of particular concern for women working in these businesses where there are no regulations and isolated workers may have little access to up-to-date information and little support for implementation of best practices of occupational health and safety.

This study was conducted to examine the knowledge and practice of OH&S regarding hepatitis C and to identify the potential risk for transmission of HCV and barriers to the implementation of OH&S practices in beauty therapy.

MATERIAL AND METHODS

The survey was carried out in Peshawar district cantonment area and Town-III during November 2007. A structured questionnaire was prepared for distribution among selected beauty clinics. Beauty clinics having 1-2 years of continuous setting and beauty therapist with 6-12 months of employment were included. The questionnaire

evaluated the employed staff profile and client number, qualifications and training of beauty therapy operatives, actual and potential exposure to blood and blood products, occupational health and safety information and training related to blood spills and knowledge of hepatitis C and its transmission.

Percentages and frequency distributions were calculated from the relevant data.

RESULTS

The questionnaire was distributed among 120 beauty clinics, whereas 100 beauty clinics completed the questionnaire, the response rate was 83.3 %. Total number of employees in the selected beauty clinics were 270.Full time and part time employment in the beauty clinics was 84.78% (229/270) and 15.22% (41/270) respectively. Majority of the employees were female i.e. 91.85% (248/270) as compared to male 8.15% (22/270). It was also noticed that 97.8% employees (264/270) were not tested for hepatitis B & C at all. Practice ranged from 40 -300 clients per week among the clinics, with a median of 130 clients and mean 133. Total number of clients was 13,341 in a week. Around 80% (20618/25773, 79.99%) of the 25773 procedures carried out in the 2nd week of November 2007 in the 100 beauty clinics, exposed beauty therapist to blood and consequently to blood borne infection.

Table 1: Reported procedures during which beauty therapy operatives had ever been exposed to blood.

Procedure	YES(%)	No.of times performed in the past week	Times performed in the past week(%)
1. Waxing	47	2454/25773	9.5
2. Hair cutting	23.5	7113/25773	27.6
3. Plucking	70.6	3443/25773	13.36
4. Threading	64.7	2639/25773	10.24
5. Eear and nose piercing	76.5	819/25773	3.177
6. Body piercing	29.4	29/25773	.0011
7. Facial	5.9	2235/25773	8.67
8. Electrolysis	17.6	495/25773	1.92
9. Manicure	29.4	632/25773	2.45
10. Pedicure	17.6	742/25773	2.88
11. Tatooing	5.9	17/25773	.00066
Total		20618/25773	

Table 2: Occupational Health & Safety Practices to avoid contact with blood at work place (n=270).

	Yes		No	
Precaution used	Number of beauty therapist	Percentage	Number of beauty therapist	Percentage
Washing hands	135/270	50	135/270	50
Gloves	79/270	29	191/270	71
Apron	95/270	35	175/270	65
Goggle	16/270	6	254/270	94
Face mask	48/270	18	223/270	82

Table 3: Sterilization of instruments in Beauty clinics (n=100).

Sterilization of instruments	Number of beauty clinics	Percentage
Always	35/100	35
Some times	59/100	59
Never	6/100	6

Table 4: OH&S Knowledge about blood contect among the beauty therapists at work place (n=270).

Knowledge	Yes		No	
	Number of beauty therapist	Percentage	Number of beauty therapist	Percentage
Blood Spills	111/270	41.2	159/270	58.8
Blood to Blood Contact	111/270	41.2	159/270	58.8
Hepatiris C	92/270	34	178/270	66

Table 5: Major source of Information about OH&S procedure (n=270).

Major Source of Information	Number of beauty therapist	Percentage
Professional Training	16/270	5.9
In House Training	111/270	41.2
Professional Assciations/Common Sense	64/270	23.5
Media	79/270	29.4

Table 6: Knowledge about hepatitis C transmission among beauty therapist n=270.

Activity	Yes		No	
	Number of beauty therapist	Percent-age	Number of beauty therapist	Percent-age
Sneezing	143/270	53	127/270	47
Coughing	143/270	53	12/270	47
Hugging	95/270	35	175/270	65
Kissing	192/270	71	78/270	29
Sexual inercours without a condom	270/270	100	-	-
Sharing towels	143/270	53	127/270	47
Sharing tooth brush	205/270	76	65/270	24
Sharing tea cups/water glass	205/270	76	65/270	24
Using contaminated needles/ syringes and razors/blades	270/270	100	-	-
Sharing contaminated combs	111/270	41	159/270	59

The favored method of sterilization was boiling i.e. 58.8 % (10/17), whereas 35.3% used chemicals (antiseptic solutions) for sterilization e.g. dettol, spirit, potassium per magnate and pyodine.

Participant's knowledge about OH&S practice in relation to blood spills and blood to blood contact at work was also put to test. The results are indicated in Table 4.

Confusion between hepatitis B, C and HIV/AIDS was evident in responses to questions about the respondent knowledge of hepatitis C: and mode of transmission for hepatitis B and HIV/AIDS were incorrectly identified as a mode of transmission for hepatitis C. Table 6 depicts the knowledge of beauty therapist regarding activities which would expose them to hepatitis C.

DISCUSSION

The study describes the potential of transmission of blood borne diseases, including hepatitis C, in the beauty therapy practice. In 100 beauty clinics, around 80% of the beauty therapist reported that the procedures they carried out had exposed them to blood. Potential exposure to blood borne infection is estimated on the basis of proportion of procedures performed. Important aspect of the study was that irrespective of the procedure performed, the beauty therapy operatives were exposed to blood in any case.

The study also focused on the measures adopted by the beauty therapist to avoid contact with blood during work. The results indicate that 50% beauty therapist washed hands before each procedure; apron was used by 35.3%, gloves by 29.4 %, face mask by 17.6% and goggles by 5.9%. However, personal observation during the survey indicated otherwise as only few of them washed hands before each procedure and most of the beauty therapist only used apron during the work. With regard to use of gloves, goggles and face mask, it was indicated that as these cause hindrance in work therefore use was minimal. The results were similar to the finding in a study conducted by Oberdorfer et al.[15]

The beauty therapists were asked to indicate the sterilization procedures undertaken in their clinics. The results show that only 35.3% carried out sterilization regularly, where as 58.8% carried it out sometime and 5.9% never. The most commonly used method for sterilization was boiling (62.5%). The other method indicated was use of chemicals (37.5%). When asked about the disposal of beauty clinic waste, all of them reported disposal by throwing waste in the dustbin placed in the clinic, which was later taken away by the sweeper of the area. However, personal observation showed that none of them carried out standard sterilization regularly; they neither washed hands nor equipment in between the procedures. Hence, the results of the survey based upon beauty therapy operatives statements are biased to a greater extent. It is comparable with studies conducted by Janjua & Nizamy[16] and Hellard et al.[17]

OH & S information is inadequate in this industry and knowledge of hepatitis is poor. The main deficient areas were the extent of information about hepatitis C, its transmission, and the activity, which expose them most to this virus. Of particular concern is the high number (23.5%) who identified 'common sense' as source of OH& S information. This was an alarming state of affairs and indicates the lack of professionalism in the industry. There was no check upon beauty therapist to open clinics even if they had not undergone professional training from a recognized institute. It seems that anyone having little bit knowledge of beauty therapy procedure can open his/her clinic. Palmer and Freegards[18] study showed that only one fifth of 43 employees had ever received skin care training.

It was also noticed that 97.8% of the employees were never tested for hepatitis B&C before and during the employment. This again indicates lack of knowledge on part of the employer viz a viz health risks to his client and to the employee. Clear government regulations were also lacking in this regard.

Health promotion information regarding hepatitis C and OH&S to prevent transmission of blood born infection are clearly needed. And if the government does not take timely action to regulate the industry, the general public is at high risk of getting hepatitis C, as nowadays more and more people are visiting beauty therapy clinics.

CONCLUSION

The study indicates that beauty therapy practice exposes both operator and client to the blood and is therefore a potential site for the transmission of blood borne diseases especially hepatitis C. The study also establish the fact that the industry is non-regulated and most of the beauty therapist lack professional training. Clinics are opened and closed randomly, ownership changes frequently and employees are hired and terminated without keeping any record.

The local government can play an effective role in carrying out random checks of the beauty therapy clinics. Media can also play an effective role for awareness among the general public as well as beauty therapy operatives about hepatitis C and its transmission through procedures under taken in beauty clinics. We recommend:

1. Educating public about hepatitis C transmission through percutaneous exposure to blood.
2. Empowerment of client to ask about safety when purchasing services in beauty therapy clinics.
3. Health promotion information about hepatitis C and OH&S practice to beauty therapist to prevent transmission of blood-borne diseases.
4. Mandatory use of standard precautions and protective barriers by beauty therapist.
5. To reduce the risk of HCV transmission, beauty therapist, should undergo formal training in standard precaution and infection control procedures before being registered.
6. Screening and testing for hepatitis C, of workers employed in beauty industry before and during the employment.
7. Implementation and regular evolution of infection-control practices by the beauty therapist in the cosmetology and barber industry by local councils/authority.
9. Protocols should be in place for reporting and follow-up of percutaneous or per mucosal exposures to blood.
9. Those who are HCV and HBV should not be allowed to participate in exposure-prone procedure.

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