

Blood-borne viruses: are we taking them seriously? A survey of UK oral and maxillofacial surgeons

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Accepted 8 June 2010

Available online 10 July 2010

Abstract

The nature of the work done by oral and maxillofacial surgeons (OMFSs) potentially places them at risk of transmission of blood-borne viruses from patients. We investigated the incidence of exposure to infected blood among OMF surgeons, and whether enough protection is being used. An anonymous postal questionnaire was sent to all OMFS consultants working in the UK in 2008 ($n = 344$) to investigate three areas relating to blood-borne viruses: incidence of surgeons experiencing and reporting exposure to potentially infected blood, their opinions about which patients pose a particular risk, and treatment plans and equipment selected when given two set clinical situations. A total of 148 consultants (43%) responded. Of the 80 respondents (61%) who had been exposed to blood within the last five years, more than two-thirds ($n = 55$) did not always report such incidents. Eighty-five (60%) stated that they considered that all patients posed a risk to the surgeon, and 104 (73%) altered their practice depending on the perceived risk from the individual patient.

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Keywords: Blood-borne virus; Hepatitis; HIV; Blood exposure

Introduction

Blood-borne viruses are increasing in prevalence¹ and the nature of work done by oral and maxillofacial surgeons (OMFSs) potentially places them at risk of their transmission from patients.

According to figures from the Department of Health in 2001, of the 41,200 people living in the UK who were estimated to be infected with HIV, 12,900 were not aware that they were infected.² It is estimated that 180,000 people are chronically infected with hepatitis B, and 250,000 are chronically infected with hepatitis C in the UK.¹

OMF surgeons routinely use rotary and sharp instruments, and wires in areas with limited access, which puts them at risk of exposure to infected blood.^{3–5} The routine use of universal infection control methods and personal protective equipment, including eye protection, can help prevent such exposure and the risks that it can cause. Exposure-prone procedures are defined as “those where there is a risk that injury to the worker may result in exposure of the patient’s open tissues to the blood of the worker. These procedures include those where the worker’s gloved hands may be in contact with sharp instruments, needle tips or sharp tissues (spicules of bone or teeth) inside a patient’s open body cavity, wound or confined anatomical space where the hands or fingertips may not be completely visible at all times”.⁶ Currently, oral and maxillofacial surgeons infected with HIV or hepatitis C, and those with a hepatitis B viral load that exceeds 10^3 , or who have the HBsAg

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Table 1
Reasons for not reporting exposure to blood ($n = 148$).

	No. (%)
Reporting system too complex or time consuming	59 (40)
Patient appears to have a low risk	48 (32)
Little point in reporting (e.g. lack of treatment)	10 (7)
No wish to have prophylactic treatment	8 (5)
Other	12 (8)

antigen, are not allowed to do procedures that are prone to exposure.^{6–8}

Research shows that exposure to blood is generally under-reported, and many healthcare workers do not protect themselves adequately.^{9,10} We report the results of a questionnaire sent to OMFS consultants in 2008 relating to three areas about blood-borne viruses.

Method

An anonymous postal questionnaire was sent to all OMFS consultants ($n = 344$) listed as working in the UK by BAOMS (British Society of Oral and Maxillofacial Surgeons) in 2008. It investigated three areas relating to blood-borne viruses: the incidence of exposure to potentially infected blood by surgeons and their reporting of such incidents; their opinions about which patients pose a particular risk; and the treatment plans and equipment they would select for two given clinical situations. A letter stating the purpose and nature of the questionnaire, and a stamped addressed envelope were also included. Responses were collected by post and questionnaires were not re-sent to those who did not respond. The questionnaire is included in the online version of the paper.

Results

There was an overall response rate of 43% ($n = 148$). The mean (SD) age of respondents was 48.5 (6.9) years (range 37–65, $n = 136$) and the mean (SD) years as consultant was 9.5 (7.3) (range 1–32, $n = 142$). Respondents did not answer all the questions and the percentages given are relevant to the responses for each section, not the overall response.

Exposure to potentially infected blood had been experienced by 28% (40/145) of surgeons within the last year and by 61% (80/132) in the last five years.

Fifty-two percent of respondents (74/143) and 69% (55/80) of those who had been exposed to blood in the last 5 years had not always reported the incident. The reasons given are shown in Table 1.

The factors considered to cause a patient to have a high risk of carrying a blood-borne infection are shown in Table 2.

Responses to the question about personal equipment that would be used to surgically remove a lower wisdom tooth are shown in Table 3.

Table 2
Factor or factors considered to give a patient a high risk of having a blood-borne infection ($n = 142$).

	No. (%)
I consider all patients to have a high risk	85 (60)
Non-intravenous drug abuser	12 (9)
Sexual promiscuity	28 (20)
Country of origin	37 (26)
Intravenous drug abuser	48 (34)
Sexual orientation	26 (18)
Earlier blood transfusion	22 (16)
Age	8 (6)

Of the 142 respondents, 73% ($n = 104$) altered their practice depending on the perceived risk from the individual patient, and 52% ($n = 74$) used the same protective equipment for patients considered to have a high risk of infection and for those with a known blood-borne virus. Some form of eye protection was worn by 97% ($n = 137$) when treating a patient with a high risk of infection, and by 99% ($n = 140$) when treating a patient with a known blood-borne virus. However, 22 surgeons (16%) did not use any eye protection when treating a patient they considered as having a low risk of infection, and two surgeons (1%) never wore any eye protection (Table 3).

Thirty-six respondents did not answer the question relating to the treatment of a 30-year-old man, and 28 of them left comments regarding the construction of the question; it did not contain enough information, or was not specific enough for an accurate response to be given. We have therefore omitted this question from the results, but have included the responses in Table 4 for completeness.

Discussion

OMF surgeons do procedures that are prone to exposing them to blood, and they risk the transmission of blood-borne viruses, the consequences of which are serious both in terms of health and career. Our results suggest that the incidence of such exposure among OMF surgeons is high with 61% reporting such incidents in the last five years. The risk of

Table 3
Responses to question about personal equipment that would be used when surgically removing a lower wisdom tooth ($n = 142$).

	Risk posed by patient		
	Low	High	Known blood-borne infection
Gloves	138 (97)	96 (68)	84 (59)
Double gloves	3 (2)	56 (39)	72 (51)
Indicator gloves	0	13 (9)	17 (12)
Face mask	108 (76)	111 (78)	113 (80)
Visor	29 (20)	53 (37)	58 (41)
Glasses or loupes	90 (63)	84 (59)	67 (47)
Plastic apron	20 (14)	20 (14)	19 (13)
Impermeable gown	60 (42)	64 (45)	64 (45)

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