

PATIENT'S ATTITUDE TO WEARING OF GLOVES BY ORTHODONTISTS

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ABSTRACT

The aim of this study was to evaluate the level of awareness of orthodontic Jordanian patients to the importance of the wearing of gloves by orthodontists. Questionnaire was distributed to a random sample of a total 274 orthodontic patients, aged 15-25 years attending orthodontic clinic for the first time. Most of orthodontic patients (94.9%) considered orthodontists should wear gloves routinely. 89.4% of respondents stated that glove wearing will protect both orthodontists and the patients. 11.3% would not mind visiting an orthodontists who did not wear gloves. The majority of patients (88%) mentioned that gloves should be changed after each orthodontic patient. The results of this study showed a high level of awareness among orthodontic patients on the importance of wearing gloves during treatment and they would prefer to visit those orthodontists who wear gloves while treating them.

Key words: Attitude, Gloves, Orthodontics, Jordan

INTRODUCTION

Many authorities put comprehensive guidelines on infection control in dentistry¹⁻³. Infectious diseases such as hepatitis B, acquired immune deficiency syndrome, herpes simplex and cytomegalovirus are important risks for dentists, patients, friends and other patients⁴⁻⁶. Dentists with ungloved hands may be a vector in cross infection or may themselves get infected⁷. Infected blood may be harbored beneath finger nails for five days⁸.

In dental clinics, gloves are worn for many reasons: to protect the operator from infection carried by the patient, to avoid transmission of infection from patient to patient, to reassure the patient that the operator is aware of dangers of cross infection and is taking steps to avoid it⁹.

Dentists who wear gloves for all patients and procedures represented the majority of respondents

(84.6%) in Australia¹⁰. While some dentists found it difficult to accept wearing of gloves¹¹. Dentist may show hesitation to accept glove wearing for all patients during dental treatment. This may be due to operating difficulty, particularly when using endodontic instruments^{12, 13}. Other factors include: reduced sensations, reduced movement, low infectious risk, skin reaction, patient acceptance, lack of supply, cost and other cause¹⁰. But some authors suggest that there is no good reason, in terms of comfort that this should be the case¹⁴. In a survey conducted by Porter et al they found almost all dental patients expected the dentists to wear protective gloves¹⁵.

A study on general practitioners regarding factors influencing the wearing of gloves during dental treatment, most of respondents (70.2%) mentioned that unsolicited patient comments regarding glove wearing practices have generally been favorable, while only 2% reported that patient comments had generally been negative¹⁰.

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Regarding orthodontic treatment, some authors have considered that cross infection regimes during orthodontic treatment is not as rigorous as those required in general dental practice^{16, 17}. It has been shown that orthodontist may be exposed to blood contact with considerable frequency¹⁸. Previous reports showed that the level of gloves use by orthodontist is lower than general dental practitioner¹⁸⁻²².

In Jordan, no previous reports recorded the awareness of patients to gloves use by dentist so the purpose of this study was to evaluate the level of awareness of Jordanian orthodontic patients to the importance of wearing gloves by orthodontists.

MATERIALS AND METHODS

Patients attending orthodontic clinic in Prince Ali Hospital in Karak city in south of Jordan, for the first time were asked to participate in this study. Patients above 15 years old were included in the research. Questionnaire was used in this survey which was based on the one used in the earlier study of patients attending the radiographic department in dental hospital.⁹ Questions asked were: do you consider that orthodontist should wear gloves while treating patients? Are gloves worn to protect the orthodontist or the patient? Would you attend an orthodontist who did not wear gloves? And do you consider that orthodontist should change gloves between patients, or is washing the gloved hands sufficient?

Questions were translated to arabic language and a pilot study was done on 20 patients with various ages to make sure that questions were clear. But these patients were not included in the study. Other data was included in this questionnaire like: age, gender, level of patient education. Each patient completed the questioner in orthodontic clinic and replies were anonymous to have unbiased responses. Data were analyzed using descriptive statistics

RESULTS

Two hundred and seventy four were included in this study. Representing 201(73.3 %) were female and 73 (26.6 %) were male with mean 16.2, SD±2.3 years. The age range was 15-25 years. 94.9% of participants mentioned that orthodontists should wear gloves dur-

ing orthodontic treatment (Figure 1). 89.4% believed that gloves are worn for protection both for the patient and the orthodontist (Fig 2), 88.7% of patients wouldn't attend to an orthodontist who did not wear gloves (Fig3).

The majority of patients (88%) mentioned that gloves should be changed after each orthodontic patient. Eight percent believed that washing of gloved hands was adequate and only 4% of participants would leave the decision to orthodontist (Fig 4).

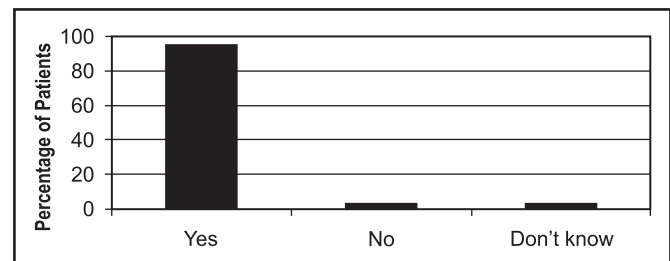


Fig 1: Patient's opinion on whether orthodontist should wear gloves during treatment

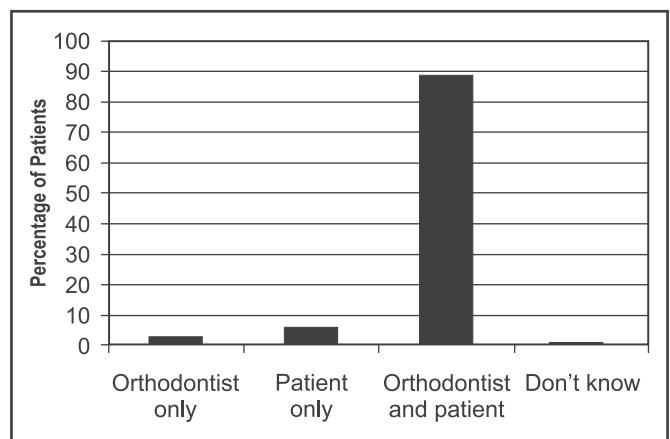


Fig 2: Patient's opinion on whether gloves are worn to protect orthodontist or patient

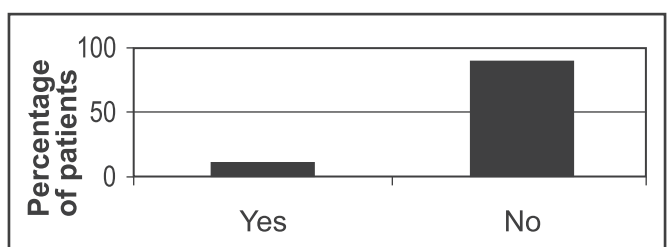


Fig 3: Patient's opinion on whether he/she would attend an orthodontist who does not wear gloves

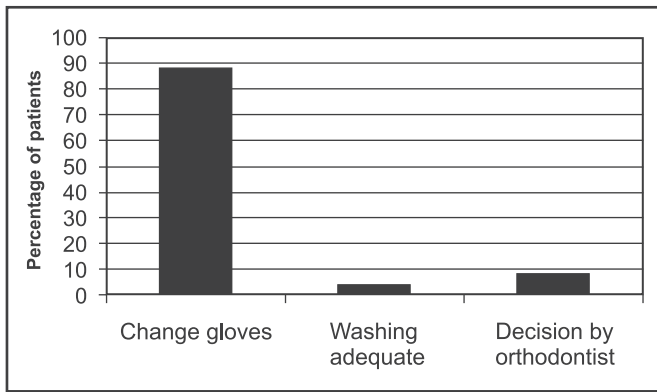


Fig 4: Patient's opinion on whether an orthodontist should change gloves between patients or wash is sufficient

DISCUSSION

Wearing gloves during treatment is considered an integral part of cross infection control in dental clinics. Some authors considered hands to be a major source of infection.⁶ So a comprehensive guideline on infection has been recommended by many authorities¹⁻³. One of these recommendations is the routine use of gloves by dentists. That can help in the prevention of infection transmission from symptomatic and asymptomatic patient to dentists as well as to other patients.

The present study showed that the majority of patients surveyed have a high awareness to the importance of gloves use by dentists during orthodontic treatment (95%). This result is in agreement with previous results by Kearn and Burke²³. Where 97% of orthodontic patients considered that orthodontist should routinely use gloves. Patients attending an accident and emergency department of dental hospital showed similar results in which 93.6% considered wearing gloves are essential while treating patients²⁴. The result of this study is much higher that was obtained by previous authors^{9,25-27}. This percentage (95%) indicates that level of cross infection control awareness among patient is considerable.

Previous reports showed variations in the level of using gloves among orthodontists in different countries. In USA, Woo et al found 59% of orthodontist use gloves²¹, in Canada McCarthy reported that 85% of orthodontists use gloves routinely in their clinics²⁸. In Taiwan 51% of orthodontist use gloves while treating their orthodontic patients²⁹. In United Kingdom, 39% of surveyed orthodontists use gloves routinely and this

figure has increased in comparison to previous results²⁰. But the figure in Jordan was not recorded. Reasons given by orthodontists for not wearing gloves routinely involved loss of tactile sensation, small risk, lack of comfort, movement is restricted, cost, smell of gloves and worries about dropping instruments³⁰.

Majority of orthodontic patients (89.4%) considered that gloves are worn to protect orthodontists and patients. This result is in agreement with previous reports^{9,23,31}. But it is in contrast to the result reported by Bowden when 31% of patients surveyed believed that the main cause for dentist to wear gloves was to protect dentist from patient²⁶. Otuyemi et al found 64% of respondents felt that gloves are worn to protect both the patient and the operator²⁵. The increase of the awareness of the importance of cross infection control procedures may explain this result (89.4%) among patients.

Since the overwhelming majority of orthodontic patients surveyed felt that orthodontist should wear gloves during orthodontic treatment, so it is expected to have most of patients (88.7%) would not like to attend an orthodontist who did not wear gloves. 11.3% of orthodontic patients would attend an orthodontist for treatment even when gloves are not worn. Almost similar result was obtained by Kearns and Burke on orthodontic patients previously (15.5%)²³. The figure reported by other authors was high when 51.4% of patient attended the radiography department as reported by Burke et al⁹ and 34.4% of patents attended to dental outpatient clinic of a university teaching hospital as reported by Otuyemi²⁵ would like to attend for dental treatment when gloves are not worn. Kearn et al reported that 28% of patients attended emergency department would not attend a dentist when gloves are not worn³¹.

Although, bleeding is not expected during orthodontic treatment, most respondent would not like to attend operator who dose not wear gloves. However, 11.3% conflicts with finding that only 3% of patients felt that gloves wearing was unnecessary.

A study on hospital and general practice patients showed that 32% and 28% of patients were against wearing of same gloves on several patients respectively³². In this study 4% of patients were in favor of washing of gloves between patients. The majority of

patients (88%) preferred the option of changing of gloves between patients. This result is in common with previous reports^{9, 23, 25, 31}.

CONCLUSION

The results of this study showed a high level of awareness among orthodontic patients on the importance of gloves use during treatment and they would attend orthodontists who wear gloves while treating them.

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