

Blood Pressure Monitoring amongst Fijian General Dental Practitioners

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Abstract: This study was designed to gauge the attitude and practice towards monitoring of blood pressure among dentists in Fiji and to assess whether they were willing to participate in a national health campaign to screen blood pressure of dental patient without remuneration.

Sixty-two questionnaires were mailed out to all General Dental Practitioners in the Republic of the Fiji Islands. Responses were obtained from 49 (79 %) dentists following a second reminder letter.

The majority of the practitioners (85 %) had been taught to measure blood pressure as undergraduates and approximately two-third of them stated that blood pressure screening in dental office was very important. Only about one-third of the respondents reported measuring blood pressure routinely, however this figure rose dramatically to 92 % when assessing patients with known high blood pressure. Approximately two-thirds of the practitioners were willing to participate in a national health campaign to screen blood pressure of dental patients without remuneration. Most of the dental practitioners in Fiji acknowledged that blood pressure monitoring in dental office was very important. They also stated that additional training in blood pressure monitoring was of necessary. Therefore, it is essential for stakeholders such as the Fiji Dental Association and the Ministry of Health to assist in providing guidelines and training in blood pressure monitoring for dental professionals in Fiji as well as to assist in conducting national health campaigns to screen for blood pressure. (PHD 2004 Vol 11 No 1 Pages 44 - 46)

Introduction

Blood pressure monitoring of patients attending for dental care is an essential aspect of physical evaluation in the dental office. With advancing age and concomitant use of drugs, the prevalence of this chronic disease contributes to greater risk of emergencies in dental practice and complication in dental treatment. Medications that can affect the cardiovascular system are routinely administered worldwide on a daily basis in dental practice. Although hypertension is usually an asymptomatic clinical condition, it is considered to be a major contributing factor to some systemic diseases.¹ Untreated hypertensive patients frequently suffer from diseases such as congestive heart failure, myocardial infarction, stroke and renal insufficiency.^{1,2} Moreover, higher levels of systolic and diastolic blood pressure are significantly related to the increasing risk of mortality, morbidity and disability.³

Many dentists in developed countries are encouraged to participate in national efforts to screen blood pressure of hypertensive patients. In the Netherlands for example, about twenty percent of the adult population aged from

31 to 60 years is estimated to suffer from hypertension.⁴ Dentists are encouraged to screen patient for hypertension because a high proportion of the Dutch population (65. 9%) visit a dentist at least once a year.⁴ In the United States, the mortality rate from hypertension has declined to fifty percent since 1972. This has been achieved by involving various healthcare professionals in the national effort to monitor patients with high blood pressure.⁴

As screening of patients for hypertension is a potentially vital aspect in dental practice, dentists in Fiji could also play a significant role in detecting hypertensive patients who visited their surgery. Such a contribution can help in the early detection of and with appropriate referral assist in the treatment of patients suffering from high blood pressure. Currently there is no information and data concerning the number and practice of dentists measuring blood pressure of their patients in Fiji. The incidence of blood pressure is seen to rise with age in both indigenous Fijian and Indo-Fijians in both genders. Previous studies have shown that the prevalence of hypertension was found to exceed 8. 5 % in an urban group examined and in the older age group prevalence exceeds 20 %. In Fiji with a relatively small population there are approximately 600 cardiovascular disease related deaths annually amongst those aged 20 to 59 years, most of which could be considered to be a consequence of hypertension.^{5,6,7} This study aimed to gauge the attitude and practice of the monitoring of blood pressure amongst dentists in Fiji and to assess whether they are willing to participate in national health campaign to screen blood pressure.

Methods

In early 2004 a pilot questionnaire consisting of three questions was provided to fifteen participants at a continuing education session of the Fiji Dental Association. The final questionnaire was then mailed in pre-paid envelopes to all but five of Fiji's dentists both in the government and private sectors. The five not sent a questionnaire was due to the details being provided by the Fiji Dental Association not being accurate. Responses were obtained from 49 out of the 62 (79%) dentists following a second reminder letter. The survey consisted of twelve questions. The first three questions related to the respondent's demographics and the remaining nine questions related to the knowledge of and attitudes towards blood pressure monitoring, willingness to participate in a national campaign to screen blood pressure, and type of future training preferred. The data was analyzed by utilizing the Epi-Info Program 2002. Prior to the commencement of this study approval was obtained by the School of Oral Health Research Committee.

Results

Approximately two-thirds of the respondents were male and one-third female. Fifty seven percent (n=21) of the participants had been working less than 15 years and forty three percent (n=21) had work more than 15 years. Approximately 67% (n=33) of the participants were currently employed in the government sector, and about 27% (n=13) were in private sector. Only 6% (n=3) were employed at the School of Oral Health, Fiji School of Medicine. When asked about the importance of blood pressure monitoring, two thirds (n=33) of the respondent stated that it was very important, while one third (n=16) believed that it was important and none stated that it was not very important or unnecessary. Only 6% (n=3) of the practitioners had never been taught to measure blood pressure. The majority of the respondents (85%, n=39) received training in measuring blood pressure as undergraduates. Thirty one percent (n=15) of the practitioners did not possess a sphygmomanometer capable of measuring patient's blood pressure. Only about one-third of the respondents reported measuring blood pressure routinely, however this figure rose dramatically to 91.8% (n=45) when assessing patients with known high blood pressure. Approximately half of the practitioners (n=24) were willing to monitor patient's blood pressure without remuneration, whilst the others (n=22) would only screen blood pressure if they were paid for it. Most participants (86%, n=42) would like to allow their assistants to monitor blood pressure of dental patients in their office. When asked about their involvement in a national health campaign to screen

the blood pressure of dental patients without charge, approximately two-third were in favor of such, however about 31% (n=15) would consider taking part and 6% (n=3) did not want to participate in such a campaign. When responding to the type of further training they preferred, 37% (n=18) of the participants preferred an evening course, 22% (n=11) desired a half day course, and 22% (n=11) were willing to participate in a one day course. Six percent of the participants would prefer to have training and education in a course of more than one day's duration.

Discussion

This study found that not all of the participants made it a routine practice to monitor blood pressure of their patients even though majority of them (85%) had been taught to measure blood pressure in their undergraduate training. About half of the participants affirmed that the lack of remuneration and the shortage of blood pressure equipment, and time constrain for providing screening were some of the major barriers. Other possible reasons for not taking blood pressure readings could be attributed to not being sure of what precautions would be taken of patient in a hypertensive state, fear of straying outside a professional boundary, and not seeing its relevance to the practice of dentistry.¹ This being in spite the fact that most of the participants believed that screening for hypertension in dental office was, very important. This is unlike North American dentists whom have a high rate of monitoring blood pressure.² The clear majority of the respondents were willing to, or would consider participating in a national health campaign for monitoring blood pressure.

Blood pressure monitoring prior to and in certain cases during dental surgery, it is essential to evaluate patients in this regard and aid in preventing medical emergencies. Undiagnosed and untreated hypertension can result in the increased risk of acute hypertension crisis. The added risk of hypertension crisis attributed to the use of sympathomimetic agent such as epinephrine that is commonly administered as part of dental local anesthetics. The complications of an acute hypertensive crisis in dental patients are potentially grave and include: myocardial infraction, cerebral hemorrhage, renal failure, angina pectoris, cardiac arrhythmias, and lung edema or congestive heart failure.^{8,9}

Currently, there are no guidelines for the practice of monitoring blood pressure in dental patients in Fiji. It is encouraging that most of the dentists were keen to undertake additional training in this area. Bodies such

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as the Fiji Dental Association may wish to formulate guidelines and provide continuing education for the monitoring of blood pressure.

Other stakeholders such as Ministry of Health may also wish to engage the dental profession in assisting in national health campaign efforts to screen for blood pressure. Further research in this area is warranted.

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Unless you are willing to drench yourself in work beyond the capacity of the average person, you are just not cut for the positions at the top
(J. C. Penny)