

obstruction of lymphatic drainage, which later leads to more swelling and further constriction, until the venous and arterial circulation is compromised as well. Persistent swelling for longer time can lead to decreased circulation which can threaten the viability of the affected fingers<sup>2</sup>. Even though it is not a life threatening condition but it can lead to a severed digit if not treated as early as possible. Early referral from primary care clinics is vital in order to avoid the complication.

For several years many techniques have been described in the literature for the removal of a tight ring<sup>3</sup>. Most clinicians use the non-destructive methods such as the application of suture, glove, rubber band, nylon tape, ribbon gauze, and paper clips to remove the stuck ring. Usually the destructive method of removal will be reserved as the last resort. High speed dental handpiece drill offered an option to physician when encounter such difficult case during emergency situation. The most important part of the dental drill is a drill bit or burr. It is small and highly durable, able to endure high speed rotation and the heat that is subsequently generated. Many burr shapes are manufactured, each with varying cutting and drilling abilities. In this case the diamond burr was used to initially put two land marks on the surface of the ring, so that it could easily be detached from the finger. At the

same time irrigation was done with sterile water from a 10ml syringe which served as a coolant. This procedure were relatively time-saving and cost effective for the patient in which patient did not required admission to the ward. Only one case report of such ring removal technique using the diamond tipped dental drill with restoration of function and preservation of the finger has been reported<sup>4</sup>.

#### CONCLUSION

The technique described in this case report is a valuable and relatively safe technique and offers another option for the emergency physician to facilitate a timely removal of a tight ring. Furthermore, it is a relatively time-saving and cost effective procedure.

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## ABSTRACT

# Association Of Risk Factors For Hypertension In A Rural Population Of Northern Perak

**K W Loh\*, Rani F\*, Edmund T C Chan\*, HY Loh\*, CW Ng\*\*, F M Moy\*\***

\*Faculty of Medicine, University of Malaya, 50603 Kuala Lumpur, Malaysia, \*\*Julius Centre University of Malaya, Department of Social & Preventive Medicine, Faculty of Medicine, University of Malaya, 50603 Kuala Lumpur, Malaysia

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#### ABSTRACT

Hypertension is a major public health problem in Malaysia. The National Health and Morbidity Survey 2006 showed the prevalence of hypertension among adults 30 years and above was 43%. Therefore we attempted to examine the association of known modifiable and non-modifiable risk factors of hypertension. A survey was initiated among the rural population of Northern Perak. A total of 2025 respondents aged 30 years and above were recruited using a multi-stage sampling among five districts in Northern Perak. Hypertension was defined as self-reported hypertension and/or average of two blood pressure readings at single occasion with SBP  $\geq$  140mmHg or DBP  $\geq$  90 mmHg. Body mass index (BMI) was defined using the Asian criteria and IPAQ was used to evaluate physical activity. Body weight, height and blood pressure were obtained using standard procedures. In total, 1076 (54.9%) respondents were found to be hypertensive. Significant associations ( $p < 0.001$ ) with hypertension were noted for increasing age, low physical

activity, high BMI, no education background and positive family history of hypertension. The association between hypertension and each risk factor was investigated after adjusting for age, sex, ethnicity, education background, family history, BMI, physical activity, smoking and diet using Multiple Logistic Regression. Respondents who were obese had the odds of 3.69 (95% CI: 2.22-6.14) of having hypertension while those with positive family history had the odds of 1.96 (1.59-2.42) times for hypertension. A significant increase ( $p < 0.001$ ) in risk for hypertension was noted for age. Those with moderate physical activities were 1.40 (1.04-1.78) times more of having hypertension than those active. Poor diet score and smoking were not significantly associated with increased risk for hypertension. In conclusion, modifiable risk factors such as BMI and physical activity are important risk factors to target in reducing the risk for hypertension.

#### KEY WORDS:

*Hypertension, obesity, physical activity, BMI*