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LETTER TO THE EDITOR

**MORE STUDIES NEEDED ON BETEL NUT CHEWING AND POOR HEALTH OUTCOMES AMONG
PAPUA NEW GUINEANS**

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Dear Editor-in-Chief,

Betel (areca) nut chewing is the fourth commonly used psychoactive substance behind alcohol, smoking and caffeine use globally [1]. It is also a common habit in Papua New Guinea [PNG] but limited research has been done on its association with poor health outcomes by PNG medical scientists. Betel nut quid chewing and its association with oral pre-cancerous and cancerous lesions are well recognized and documented [2]. The betel quid is now recognized by WHO as a carcinogen [3]. In the 2013 annual PNG Medical Symposium held in Lae, Ome et al at PNGIMR showed contrasting evidence from this habit and birth outcomes [4]. More work needs to be done to show conclusive evidence that betel nut chewing have a negative effect on birth outcomes such as birth weight.

Isi Kevau et al at the Sir Buri Kidu Heart Institute in Port Moresby General Hospital, PNG, studied the cardiovascular effects of

betel nut chewing and found that the acute effects are, transient rise in baseline heart rate lasting about 20 minutes, variable blood pressure response and transient myocardial ischaemia in patients with coronary artery disease [5]. The exact mechanisms of these observed clinical effects are yet to be elucidated.

Betel nut quid chewing has also been shown to be associated with poor glycaemic control and metabolic syndrome [6, 7].

According to other researchers there are various acute and chronic effects which seem to be negatively associated with betel nut chewing [8 – 13].

It is recognized by many in PNG that betel nut chewing is an integral part of PNG culture and will be a mammoth task to ban the habit in PNG. To assist with the ongoing efforts to control the habit of betel nut quid chewing in PNG, health professionals and researchers in PNG need to do more in-depth both clinical and

laboratory based studies to examine the effects of betel nut quid on various systems of the body. Information generated from such studies can be incorporated into public health messages to create awareness among the public that may assist to control the habit of betel nut chewing and ultimately reduce its negative effects.

REFERENCES:

1. Gupta PC. Epidemiology of betel quid usage. *Ann Acad Med Singapore* 2004; 33 (Suppl): 31s-36s.
2. Sharan R.N, Mehrotra R, Choudhury Y, Asotra K. Association of betel nut with carcinogenesis: revisit with a clinical perspective. *PLoS One* 2012; 7 (8): 1-21.
3. World Health Organization. Betel quid and areca nut chewing and some areca nut derived nitrosamines. *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans* 2004; 85: 1-301.
4. Ome M, Singirok D, Unger H.W, Wangnapi R.A, Hanieh S, Umbers A.J, Siba P.M, Mueller I, Rogerson S.J. Effects of areca nut (betel nut) chewing on birth outcomes in Papua New Guinean pregnant women [Abstract]. In: 49th Annual Medical Symposium Proceedings; 2nd-6th September 2013; Lae, Papua New Guinea; Book of Abstract Papua New Guinea Medical Society 2013; 61-62.
5. Kevau I.H, Miam B, Jothimanikam J, Urae G, Itaki R, Mari, R, Wagiebu J, Sengupta A. Betel nut causes paradoxical vasoconstriction in patients with coronary artery disease – an exciting new discovering in Papua New Guinea with important clinical implications. *Cardiac Society of Australia and New Zealand, 47th conference presentation, 1998.*
6. Amos L.B, Margis D. Betel nut chewing: a contributing factor to the poor glycaemic control in diabetic patients attending Port Moresby General Hospital, PNG. *PNG Med J* 2005; 48 (3-4): 174-182.
7. Shafique K, Zafar M, Ahmed Z, Khan N.A, Mughal M.A, Imtiaz F. Areca nut chewing and metabolic syndrome: evidence of a harmful relationship. *Nutr Journal* 2013; 12 (67): 1-6.
8. Kiyingi K.S. Betel nut chewing may aggravate asthma. *PNG Med Journal* 1991; 34 (2):117-121.
9. Taylor RF, al-Jarad N, John LM, Conroy DM, Barnes NC. Betel nut chewing and asthma. *Lancet* 1992; 339 (8802): 1134-1136.
10. Ogunkolade W.B, Boucher B.J, Bustin S.A, Burrin J.M, Noonan K, Mannan N, Hitman G.A. Vitamin D metabolism in peripheral blood mononuclear cells is influenced by chewing betel nut (*Areca catechu*) and vitamin D status. *J Clin Endo Metab* 2006; 91 (7); 2612 - 2617.
11. Al-Rmali S.W, Jenkins R.O, Haris P.I. Betel nut chewing as source of manganese exposure: total daily intake of manganese in a Bangladeshi population. *BMC Public Health* 2011; 11 (85):1-11.
12. Osborne P.G, Chou T.S, Shen T.W. Characterization of the psychological, physiological and EEG profile of acute betel quid intoxication in Naïve subjects. *PLoS One* 2011; 6 (8): 1-11.
13. Roger J. Sullivan, John S. Allen, Caleb Otto, Josepha Tiobech, Karen Niro. Effects of chewing betel nut (*Areca catechu*) on the symptoms of people with schizophrenia in Palau, Micronesia. *British J of Psychiatry* 2000; 177: 174 – 178.