

The Relationship between Sodium, Potassium, Calcium and Magnesium in Urine and Blood Pressure Zhu Kangmin, et al., Department of Epidemiology, Tongji Medical University, Wuhan

The relationship between sodium intake and blood pressure within a population has not been demonstrated in many studies. We collected seven consecutive 24-hour-urine specimens, measured blood pressure over seven days in 148 boys aged 7-8 years and explored the relationship of sodium, potassium, calcium, magnesium or various of them to blood pressure. The multiple regression analysis showed that blood pressure was not significantly related to sodium, potassium, calcium or magnesium. The results did not support the view that the four cations were associated with blood pressure respectively. But the ratio of sodium/calcium or potassium/calcium in urine was positively related to systolic blood pressure and this relationship might vary with different family history of stroke. The results suggested that the ratio of sodium/calcium or potassium/calcium in urine may be associated with blood pressure and genetic background may have some effects on the relationship.

参 考 文 献

- Nicholls MG. Reduction of dietary sodium in Western society, benefit or risk? Hypertension 1984; 6: 795.
- Kiang Liu, et al. Variability in 24-hour urine sodium excretion in Children. Hypertension 1979; 1: 631.
- WHO scientific group. Primary prevention of essential hypertension. WHO Tech Rep Ser

- 1983; 686: 1.
- Page LB. Epidemiologic evidence on the etiology of human hypertension and its possible prevention. Am Heart J 1976; 91: 527.
- Meneely GR, Battarbee FHD. High sodium-Low potassium environment and hypertension. Am J Cardiol 1976; 38: 768.
- Pietinen PI, et al. Electrolyte output, blood pressure, and family history of hypertension. Am J Clin Nutr 1979; 32: 997.
- 朱文思,等.儿童血压测定方法及高血压评定标准的研究(综述).国外医学卫生学分册 1982; 9: 280.
- 朱文思,等.关于儿童血压的准确测量及高血压筛选标准的研究.见:全国中小学生健康状况研究协作组编.科研资料选编—中小学生健康状况研究.1983: 1.
- Hurwicz BJ, et al. Familial aggregation of blood pressure in a highly inbred community, Abu Ghosh, Isreal. Am J Epidemiol 1982; 115: 646.
- Cooper R, et al. The association between urinary sodium excretion and blood pressure in children. Circulation 1980; 62: 97.
- 张开华,等.儿童血压与钠的关系.全国第八次心血管病流行病学和人群防治科研协作会议交流资料, 1985.
- Staessen J, et al. Four urinary cation and blood pressure, a population study in two Belgian towns. Am J Epidemiol 1983; 117: 676.
- MacGregor GA. Sodium is more important than calcium in essential hypertension. Hypertension 1985; 7: 628.
- Langford HG, Watson RW. Urinary excretion of calcium and sodium in hard and soft water areas. Lancet 1972; 1: 1293.
- McCarron DA. Is calcium more important than sodium in the pathogenesis of essential hypertension? Hypertension 1985; 7: 607.

(本研究得到同济医科大学流行病学教研室张余庆、施倡元老师, 硚口区卫生局陈英黔、谭铁强同志, 两所小学的赵承英、粟芳玉等老师的大力支持和帮助, 谨致感谢)

蚊虫体内HBsAg的检测报告

江西省抚州地区卫生防疫站

已经证实从外界采集的吸血蚊虫以及实验室繁殖的蚊虫喂乙肝阳性血液后, 均可检出HBsAg, 而人工喂血实验室传代的新蚊和卵块未能检出HBsAg。但从外界采集的吸血蚊虫经传代的新蚊, 及从外界孳生地捕捞的孑孓孵化出来的新蚊是否也存在HBsAg, 尚未见报道。我站于1985年8月1日至20日将所捕获蚊虫和孑孓孵化出来的新蚊分成每10只一组进行检测。其结果如下:

在自然采集蚊虫中, 抽样传代70组新蚊, 野外捕捞孑孓孵化出16组蚊虫, 同时应用ELISA法与RPHA

法检测HBsAg, 均未检出阳性。但用ELISA法检测自然采集的吸血雌蚊120组, 却检出阳性22组, 阳性率为18.33%; 同时以RPHA法检测, 发现10组阳性, 阳性率为8.33%。这说明蚊虫吸入乙肝阳性血液后, 是可以携带HBsAg, 而HBsAg在蚊虫体内是没有复制的迹象。因此, 可以认为蚊虫生物性传播乙肝的可能性是很小的。但机械地传播是可能存在的。若证实蚊虫确能传播乙肝, 那么在一个蚊密度高、乙肝发病率高的地区, 这种传播方式具有非常重要的流行病学意义。

(黄钦铭 执笔)