Primary care service utilisation rates and pattern of the Hong Kong population

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Background: Primary health care is generally accepted as a major care provider, and but there were little data on the utilisation of primary health care services in Hong Kong.

Methods: A cross-sectional study of 5174 telephone contacts with 3148 subjects (response rate, 60.8%) completing a structured questionnaire on primary health care service utilisation rates and pattern and socio-demographics was conducted. The rates of illness and service use in the last 4 weeks, pattern of utilisation during last illness and last consultation were measured. The rates and pattern of utilisation of people with and without a regular family doctor was compared.

Results: The mean population number of consultations in 4 weeks was 0.7 per person. The proportion of people who had visited western medicine practitioner, Chinese medicine practitioner and A&E department, prevalence rate in last 4 weeks were 24.6%, 9.5% and 3.7%, respectively. A total of 71.7% had consulted a doctor in the last episode of illness including 65.4% consulting western medicine practitioners, 12.1% Chinese medical practitioners, 7.3% attended A&E department and 3.1% were admitted to the hospital. Over half of last consultations were private western medicine (64.2%) including 59.8% general practices and 4.4% in specialists, whereas over one fifth (23%) of patients visited government-funded general out-patient clinics (15.6%) and specialists (7.4%). Respectively only 8.2% and 2.7% patients had utilised Chinese medicine and other health services at their last consultation. People with a regular family doctor were less likely to use A&E department or hospital service in the last 4 weeks (2.7% vs 5.0%), and less likely to use public services in last consultation (11.1% vs 30.9%).

Conclusion: The primary care service utilisation rates in Hong Kong are high compared with countries where primary care is provided by a more unified system. The family doctor–led primary care may reduce the use of A&E department and hospital services.

Acknowledgement: This research was supported by Studies in Health Services Grant (No. SHS-P-10) from the Food and Health Bureau of the Hong Kong Special Administrative Region.

1α, 25-dihydroxyvitamin D3 suppresses differentiation, maturation and activation of dendritic cells from patients with systemic lupus erythematosus

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Background: Dendritic cells (DC), professional antigen presenting cells, are believed to play a crucial role in the pathogenesis of systemic lupus erythematosus (SLE). 1α, 25-dihydroxyvitamin D3 (VitD3), in addition to its effect on bone metabolism, has been increasingly recognised to have immunomodulatory effects.

Objective: To examine the effect of VitD3 on the differentiation, maturation, and activation of DCs in SLE patients.

Methods: $CD14^+$ monocyte–derived DCs from SLE patients and age- and sex-matched controls were derived from growth medium cultured with IL-4, GM-CSF. Mature DCs were induced by addition of lipopolysaccharide and tumour necrosis factor-α in the presence or absence of VitD3 (1×10^{-10} M) and/or dexamethasone (1×10^{-6} M). The expression of CD1a, a DC marker and markers of maturation and co-stimulatory molecules such as CD80, CD86, CD40, HLA-DR and CD83 were examined by flow cytometry. After stimulation of DCs with CD40L for 24 hours, the production of pro-inflammatory cytokines including IL-12 and IL-6, were measured by ELISA kits.

Results: VitD3 suppresses differentiation of monocytes into DCs as showed by the decreased expression of CD1a ($P<0.05$). VitD3 inhibits the expression of maturation markers including CD86, CD40 and CD83 ($P<0.05$), but not CD80 and HLA-DR. This effect was more marked in SLE patients (n=14) than controls (n=9). In combination with dexamethasone, VitD3 displayed more potent immunosuppressive effect on DCs. Under the effect of VitD3, stimulated DCs produced less of IL-12 (3.1 vs 10.4 pg/mL, P=0.02) and IL-6 (216.0 vs 224.0 pg/mL, P=0.21) in SLE patients as well as controls (8.0 vs 36.6 μg/mL, P=0.01 for IL-12) and (380.7 vs 415.2 pg/mL, P=0.04 for IL-6).

Conclusion: VitD3 is found to inhibit differentiation, maturation, and activation of DCs in vitro in both SLE patients and controls and may be considered as immunomodulatory agent in the treatment of SLE.