Nasopharyngeal Cancer (NPC)

Nasopharyngeal carcinoma (NPC) is the 7th commonest cancer in Hong Kong: 926 new cases were detected in 2008. As people at the prime of their life are mostly affected (peak age-specific incidence being 30-60 years), the impact is especially devastating.

Despite improvements in radiotherapy techniques and better treatment outcomes with combination of chemotherapy and radiotherapy, the key to higher disease-free survival rates lies in early diagnosis.

Good correlation has been shown between the stage of the disease and 5-year survival rates. In fact, the overall survival increases from below 60% for advanced stage IV disease to 90% for stage I disease. Unfortunately, only less than 10% of NPC patients present with such early stage when they seek medical assistance upon appearance of symptoms.

It is well known that NPC shows familial aggregation and is probably one of the highest amongst malignancies. In epidemiologic studies, the excess risk is generally 4 to 8 fold among individuals with a first-degree relative with NPC, compared with those without a family history. Screening may help in achieving earliest possible detection in this high risk group.

As NPC is strongly associated with Epstein-Barr virus (EBV), common screening practice is to perform EBV serology test with nasopharyngoscopy. This method is sensitive and recent research shows that regular screening with this method leads to early detection of cancer: more than 40% cases presenting at stage I. The 5 year survival rate is also much higher (exceeding 90%) for the cancer patients detected in the screening program. Hence one of the current strategies to tackle NPC is to offer screening to all NPC patients’ family members aged over 30 years.

However, there is insufficient evidence to recommend a population-wide NPC screening program in Hong Kong. Given the current annual incidence rate (crude rate) of NPC in Hong Kong (13.3 per 100,000) the yield is expected to be very low.

Recently, newer tests such as direct measurement of EBV DNA have been shown to be at least as sensitive as the EBV serology test. Although this is not currently recommended as a screening tool, study is now ongoing to assess its performance under screening circumstance.
Screening strategy for 30-70 years old family members of NPC patients:

Summary

Current study suggests that screening asymptomatic family members of NPC patients can lead to early detection of NPC and possibly survival advantage. More precise estimates of any potential survival benefit will be obtained with further researches.