

# HYPERLIPIDEMIA

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Hypercholesteronaemia is a major risk factor for Coronary Heart Disease. In Singapore CHD is second only to cancer as a leading cause of mortality. In the 1998 National Health Survey, the mean total cholesterol level of our adult population aged 18–64 was 5.5 mmol/l. 25% of the population had a high blood cholesterol level (TC  $\geq$  6.2 mmol/l).

Systemic reviews have found that reducing cholesterol concentration in asymptomatic people lower the rate of cardiovascular events. RCTs have found that the magnitude of the benefit is related to an individual's baseline risk of cardiovascular events, and to the degree of cholesterol lowering, rather than to the individual's absolute cholesterol concentration.

Many adults have no symptoms or show no sign of vascular disease, even though they have atheroma and are at increase risk of ischaemic vascular events. Continuation use of decrease cholesterol diets and lipid lowering drugs reduces concentration of cholesterol more than lifestyle intervention alone.

Below is the case history of a patient that was picked up recently in National Healthcare Group Polyclinic, Clementi.

Mr Chew CS, a 44-year-old businessman presented to clinic requesting to be referred to the hospital for excision of lumps on the dorsum of both hands. (Figure 1)



Figure 1: Large yellowish nodules on the dorsum of both hands

Clinical Examination revealed similar nodules on both elbows, knees and dorsum of both feet. The Achillis tendons are also bulky. (Figures 2 and 3)



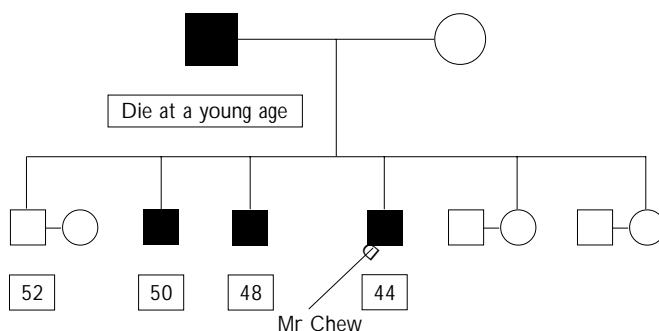
Figure 2: Patient right elbow.



Figure 3: Patient right foot.

## Family History:

Mr Chew's father died at a young age, but he could not remember the cause of his death. His second brother also has similar nodules on his body. His 48-year-old brother had a bypass surgery recently.



INVESTIGATIONS	14/12/1999	30/08/2003
Total Cholesterol	12.9 mmol/l	16/76 mmol/l
LDL	10.96 mmol/l	14.57 mmol/l
Triglyceride	1.22 mmol/l	1.81 mmol/l
HDL	1.43 mmol/l	1.38 mmol/l
Lp(a)	16.5(<30)	
Apo A	1.44(0.52-1.71)	
Apo B	3.47(0.07-1.54)	

Mr Chew has Familial Hypercholesteronaemia Phenotype IIa. The lesions seen on his hands, elbows, knees and achillis tendons are Xanthomas. He is at risk of developing vascular disease in his 30–50 years. He has to be treated aggressively with cholesterol lowering diets and cholesterol lowering drug therapy. But all he cares about is the cosmetics of his joints.

The treatment of hypercholesteronaemia has 2 aims, primary prevention and secondary prevention. Primary prevention is the long term management of people at risk but with no evidence of cardiovascular disease. Secondary prevention on the

other hand is management of people with previous acute myocardial infarction, and of people of high risk of ischaemic cardiac events for other reasons, such as a history of angina or coronary surgical procedures.

Family Physicians play an important role in the process of Primary and Secondary prevention. His role is to stratify the patient and tailor a treatment regime. The major risk factors are:

- o Increasing age
- o Male sex
- o Increase LDL cholesterol
- o Decrease HDL cholesterol
- o Increase blood pressure
- o Obesity
- o Sedentary lifestyle.

The goals of treatment can be found in the MOH guidelines 7/2001 on lipids.

#### REFERENCES

1. MOH clinical practice guidelines 7/2001; lipids.
2. NCEP-ATP III guidelines access from the internet at <http://www.nhlb.nih.gov>.
3. National Health Survey 1998.