CHAPTER 5

LIMITATIONS

The sample size may have been to small, and further larger studies are required to confirm these results. Eight control subjects have a high total cholesterol. However, none of them had severe hyperlipidaemia (defined as a TC > 7.5 mmol/L or TG > 5). This may have limited the overall result of the study.

Even though the waist circumference and BMI are considered to be reliable anthropometric indices of abdominal visceral adipose tissue accumulation, MRI or CT scans would precisely identify the proportion of abdominal adipose tissue, but these are expensive and surrogate measures of visceral fat had to be used instead, these being the waist circumference and the BMI.

No liver biopsies were performed. It has been argued that although a fatty liver may be readily detected on ultrasonography, a liver biopsy is necessary for the diagnosis of NASH, especially since imaging techniques do not detect hepatic fibrosis or inflammation easily in the

presence of fat. Since the only effective therapy at the moment is weight loss, it can be argued that these patients should not be subjected to liver biopsy and its associated risks. Only five patients had confirmed biopsies done prior to recruitment in to this study. No permission is granted generally by the Ethics Committee for invasive procedures. The use of other radiological studies such as the MRI or CT scans are expensive, and maybe nonspecific. We therefore made use of alternative surrogate markers such as hepatic enzymes, abdominal ultrasounds and adipocytokines as markers of steatosis.

In terms of alcohol levels detected, it would be a better to analyse portal blood for alcohol rather then peripheral blood. This is to avoid the first pass effect of metabolism of the liver, where most the body's toxins are metabolised, but this would be invasive and not practical. There are other factors also playing a role in the levels of alcohol detected such as the amount of adipose tissue present as this is a storage site. However, analysis of portal blood may be difficult and would require sophisticated techniques, but they should be considered.

Four patients had higher than normal levels of methanol, however.

This could have been due to porto-systemic shunting, explaining that some alcohol may have escaped directly into the systemic circulation escaping the portal blood, but this was not in keeping with their clinical picture as all the patients were clinically well.