Dietary treatment for familial hypercholesterolaemia

Review question
What is the effectiveness of cholesterol-lowering dietary interventions compared with no dietary treatment or other forms of dietary intervention in children and adults with familial hypercholesterolaemia?

Nursing implications
Familial hypercholesterolaemia is a genetic disorder that causes severe elevations in total cholesterol, which is associated with a high risk for premature coronary artery disease.

Changing diet is an important management option for patients with familial hypercholesterolaemia. Nurses play a significant role in providing dietary interventions to children and adults with the disorder, so it is vital for them to know which ones are more effective in these patients.

Study characteristics
The review included 11 studies with a total of 331 participants; these were children and adults with familial hypercholesterolaemia (no age limit described).

The intervention of interest was a cholesterol-lowering diet, which could be compared with either other forms of dietary treatment (such as the addition of omega-3 fatty acids, plant sterols or stanols, or soy protein to a cholesterol-lowering diet) or to no dietary intervention.

Summary of key evidence
Compared with a cholesterol-lowering diet, no significant differences in any of the secondary outcomes measured were found between no dietary intervention and: nutritional advice; adding omega-3 fatty acids; adding plant stanols; or a high-protein diet.

A significant difference in total cholesterol levels was found when plant sterol was added to a cholesterol-lowering diet and compared with a cholesterol-lowering diet alone at up to two months.

One study on adults indicated a significant reduction in total cholesterol at two months in participants receiving high-dose stanol, participants receiving low-dose stanol, and those receiving sterol at one month. The same study resulted in a significant reduction in LDL cholesterol in the high-dose stanol group only.

Best practice recommendations
No conclusions could be reached about the effectiveness of a cholesterol-lowering diet or any of the other dietary interventions suggested for familial hypercholesterolaemia because the available data was insufficient.

Future research should focus on large, parallel, randomised controlled and long-term trials. Studies measuring a variety of dietary treatment options that have been suggested for the disorder should also be carried out.

The full review report, including references, can be accessed at: tinyurl.com/cochrane-hypercholesterolaemia

Reference

www.nursingtimes.net / Vol 107 No 49/50 / Nursing Times 13.12.11 17