Committee Report Appendix

Statements

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Comprehensive Risk Management for the Prevention of Cardiovascular Disease


1. In order to prevent cardiovascular disease (CVD), major risk factors, including dyslipidemia, hypertension and diabetes mellitus (DM), should be managed comprehensively from the initial stage of the disease.
2. Lifestyle modification, such as encouraging healthy dietary habits, exercise and the cessation of smoking, constitutes the basis for preventing CVD. It is important to continue to provide guidance on lifestyle modification after initiating drug therapy.

Diagnostic Criteria for Dyslipidemia


1. The incidence of coronary artery disease (CAD) increases in association with increases in LDL-C.
2. The incidence of CAD increases in association with decreases in HDL-C.
3. The incidence of CAD increases in association with increases in TG.
4. The incidence of CAD increases in association with increases in non HDL-C.

Absolute Risk of Cardiovascular Disease and Lipid Management Targets


1. In primary prevention, the management targets for LDL-C should be determined according to categories based on the absolute risk of CAD. [Recommended level IIa, evidence level C]
2. In secondary prevention, an LDL-C level of <100 mg/dL should be targeted. [Recommended level IIa, evidence level C]
3. The target for the TG level should be <150 mg/dL. [Recommended level IIa, evidence level C]
4. The target for the HDL-C level should be ≥40 mg/dL. [Recommended level IIa, evidence level C]
5. The target for the non-HDL-C level should be < management target for the LDL-C level + 30 mg/dL. [Recommended level IIa, evidence level C]

Cardiovascular Disease Risk Factors Other than Dyslipidemia

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1. Hypertension is a risk factor for cerebrovascular disease and CAD.
2. DM is a risk factor for CVD, such as CAD, cerebrovascular disease and peripheral artery disease (PAD).
3. Smoking is a risk factor for CAD, cerebrovascular disease and PAD.
4. Passive smoking is a risk factor for CAD and cerebrovascular disease.
5. Aging is a risk factor for cerebrovascular disease and CAD.
6. A family history of premature CAD is a risk factor for the development of CAD.

Other High-Risk Conditions


1. A history of CAD is a risk factor for CAD and cerebrovascular disease.
2. A history of non-cardiogenic cerebral infarction is a risk factor for cerebrovascular disease and CAD.
3. CKD is a high-risk condition for CAD and cerebrovascular disease.
4. PAD is a high-risk condition for CAD and cerebrovascular disease.

Treatment — Lifestyle Modification


1. Avoid smoking and passive smoking to prevent atherosclerosis. [Recommended level I, evidence level B]
2. For the management of obesity, reduce the total energy intake and increase physical activity in order to reduce the body weight to the ideal level. [Recommended level I, evidence level B]
3. Increase the intake of vegetables, fruit, unrefined grains, seaweed, soy products, etc. [Recommended level I, evidence level B]
4. In order to reduce the LDL-C level, reduce the intake of saturated fatty acids and increase the intake of unsaturated fatty acids. In addition, limit the intake of cholesterol and increase the intake of dietary fiber. [Recommended level I, evidence level B]
5. In order to reduce the TG level, reduce the intake of carbohydrates and alcohol and increase the intake of n-3 polyunsaturated fatty acids. [Recommended level I, evidence level B]
6. In order to increase the HDL-C level, engage in moderate aerobic exercise, reduce body weight and avoid the intake of trans fatty acids. [Recommended level I, evidence level B]

7. Sustained physical activity or aerobic exercise is effective for preventing atherosclerosis. [Recommended level I, evidence level B]

**Treatment—Drug Therapy**


1. If a patient cannot achieve the management target for LDL-C after adequate lifestyle modification in the setting of primary prevention, drug therapy should be considered according to the weight of the patient’s risk. [Recommended level IIa, evidence level B]

2. If a patient persistently has an LDL-C of ≥180 mg/dL in category I, drug therapy should be considered. [Recommended level IIa, evidence level C]

3. Statin therapy is recommended for the treatment of hyper-LDL cholesterolemia. [Recommended level I, evidence level A]

4. In patients with high-risk hyper-LDL cholesterolemia, the use of ezetimibe in combination with a statin should be considered. [Recommended level IIa, evidence level B]

5. In patients with high-risk hyper-LDL cholesterolemia, the use of ethyl icosapentate (EPA) in combination with a statin should be considered. [Recommended level IIa, evidence level A]

6. In patients with hypertriglyceridemia accompanied by hypo-HDL cholesterolemia, drug therapy with fibrates or nicotinic acid derivatives should be considered according to the level of the patient’s risk. [Recommended level IIa, evidence level B]

**Metabolic Syndrome**


1. Metabolic syndrome is a high-risk condition for CVD.

2. For the treatment of metabolic syndrome, lifestyle modification is recommended. [Recommended level I, evidence level C]

**Familial Hypercholesterolemia**


1. Familial hypercholesterolemia is a frequent autosomal dominant disease associated with a high risk of CAD. Early diagnosis and rigorous treatment are recommended. [Recommended level I, evidence level B]

2. For the treatment of heterozygous FH, strict lipid management, primarily with statin
therapy, is recommended. [Recommended level I, evidence level B]
3. For the treatment of homozygous FH and drug therapy-resistant severe heterozygous FH, LDL apheresis therapy is recommended. [Recommended level I, evidence level B]

Other Types of Primary Hyperlipidemia

1. Patients with familial combined hyperlipidemia or familial type III hyperlipidemia are likely to develop CVD. As such patients respond well to dietary therapy, providing strict dietary therapy is essential. [Recommended level I, evidence level C]
2. Familial lipoprotein lipase deficiency and familial apoprotein C-II deficiency are only slightly related to atherosclerosis, although they are associated with a high risk of acute pancreatitis. Fat intake should be strictly restricted. [Recommended level I, evidence level C]

Coronary Artery Disease

1. In patients with acute coronary syndrome, strict LDL-C-lowering therapy is recommended from the initial stage of the disease. [Recommended level I, evidence level B]
2. In patients with CAD who are smokers or exhibit DM, CKD, non-cardiogenic cerebral infarction/PAD, metabolic syndrome or more than one major risk factor other than LDL-C, stricter LDL-C-lowering therapy is recommended together with management of risk factors other than LDL-C. [Recommended level IIa, evidence level B]

Diabetes Mellitus

1. Patients with DM require strict, comprehensive management of the lipid levels and blood pressure, as well as the blood glucose level, from the early stage of the disease. [Recommended level I, evidence level B]
2. In patients with DM complicated by microvascular complication such as retinopathy or nephropathy, non-cardiogenic cerebral infarction/PAD, smoking, metabolic syndrome, persistently poor glycemic control and more than one major risk factor stricter management of LDL-C is recommended together with management of risk factors other than LDL-C. [Recommended level IIa, evidence level B]
Chronic Kidney Disease

1. CKD is a high-risk condition. Comprehensive risk management, including reducing the LDL-C level to <120 mg/dL, is recommended. [Recommended level IIa, evidence level C]

Cerebrovascular Diseases

1. Statin therapy may prevent the development of cerebral infarction. [Recommended level I, evidence level A]

The Elderly

1. In the young-old (≥65 and <75 years of age), as well as adults, hyper-LDL cholesterolemia is an important risk factor for CAD.
2. Statin therapy for hyper-LDL cholesterolemia in the young-old may be effective for the secondary prevention of CAD. [Recommended level IIa, evidence level B]
3. Statin therapy for hyper-LDL cholesterolemia in the young-old may be effective for the primary prevention of CAD and cerebral infarction. [Recommended level IIa, evidence level B]
4. Statin therapy for hyper-LDL cholesterolemia in the old-old may be effective for the secondary prevention of CAD. [Recommended level IIa, evidence level B]
5. The significance of lipid-lowering therapy for hyper-LDL cholesterolemia in the old-old in the primary prevention of CAD is not clear at present. Patients should be individually treated at the discretion of their attending physician. [Evidence level C]

Women

1. Premenopausal women with dyslipidemia should be primarily treated with non-drug therapy, such as lifestyle modification. [Recommended level I, evidence level B]
2. Drug therapy should be considered in high-risk premenopausal women with familial hypercholesterolemia or those requiring secondary or primary prevention of CAD. [Recommended level I, evidence level C]
3. In postmenopausal women with dyslipidemia, lifestyle modification is given priority; however, drug therapy should also be considered, taking due account of the patient’s risk factors. [Recommended level IIa, evidence level B]