A SELECTION OF TEN CURRENT READINGS ON TOPICS RELATED TO CARDIOVASCULAR DISORDERS 2

some available as free full-text and some requiring payment

Selection of readings made by A/Prof Goh Lee Gan

READING 1 – OVERVIEW OF GUIDELINES FOR MANAGEMENT OF DYSLIPIDEMIA

Giner-Galvañ V, Esteban-Giner MJ, Pallarés-Carratalá V. Overview of guidelines for the management of dyslipidemia: EU perspectives. Vasc Health Risk Manag. 2016;12:357–69. Review. PubMed PMID: 27660458; PubMed Central PMCID: PMC5019442.

DOI: 10.2147/VHRM.S89038

Author information:
Giner-Galvañ V(1), Esteban-Giner MJ(1), Pallarés-Carratalá V(2).
(1) Department of General Internal Medicine, Unit of Hypertension and Cardiometabolic Risk, Hospital Mare de Déu dels Lliris, Alcoy, Alicante. (2) Department of Health Surveillance, Unión de Mutuas, Castellón de la Plana; Department of Medicine, Universitat Jaume I, Castellón, Spain.

ABSTRACT

Modern medicine is characterized by a continuous genesis of evidence making it very difficult to translate the latest findings into a better clinical practice. Clinical practice guidelines (CPG) emerge to provide clinicians evidence-based recommendations for their daily clinical practice. However, the high number of existing CPG as well as the usual differences in the given recommendations usually increases the clinician's confusion and doubts. It has apparently been the case for the 2013 American College of Cardiology/American Heart Association (ACC/AHA) Guideline on the Treatment of Blood Cholesterol. These CPG proposed new and controversial concepts that have usually been considered an antagonist shift respective to European CPG. The most controversial published proposals are: 1) to consider evidence just from randomized clinical trials, 2) creation of a new cardiovascular (CV) risk calculator, 3) to consider reducing CV risk instead of reducing low-density lipoprotein cholesterol (LDLc) as the target of the treatment, and 4) consideration of statins as the only drugs for treatment. A deep analysis of the 2013 American College of Cardiology/American Heart Association CPG and comparison with the European ones show that from a practical and clinical point of view, there are more similarities than differences. To further help clinicians in their daily work, in the present globalized world, it is time to discuss and adopt a mutually agreed upon document created by both sides of the Atlantic. Probably it is not a short-term solution. Meanwhile, taking advantage of the similarities, the recommended practical attitude for the daily clinical practice should be based on 1) early detection of people with increased CV risk promoting the use of validated local scales, 2) reinforce the mainstream importance of nonpharmacological treatment, and 3) need for periodically monitoring response with analytical parameters (LDL or non-high-density lipoprotein cholesterol) and global CV risk estimation. Technological solutions such as the big data technology could help to obtain high-quality evidence in an intermediate term. [PubMed — as supplied by publisher]

READING 2 – STATIN-CENTRIC VERSUS LOW-DENSITY PROTEIN-CENTRIC APPROACH — SINGAPORE PERSPECTIVE

Yan P, Tan EK, Choo JC, Liew CF, Lau T, Waters DD. Statin-centric versus low-density lipoprotein-centric approach for atherosclerotic cardiovascular disease prevention: a Singapore perspective. Singapore Med J. 2016;57:360–7. PubMed PMID: 27439304; PubMed Central PMCID: PMC4958711.

DOI: 10.11622/smedj.2016118

Author information:
Yan P(1), Tan EK(2), Choo JC(3), Liew CF(4), Lau T(5), Waters DD(6). (1) Peter Yan Cardiology Clinic, Gleneagles Hospital, Singapore. (2) Kevin Tan Clinic for Diabetes, Thyroid and Hormones Pte Ltd, Mount Elizabeth Medical Centre, Singapore. (3) Department of Renal Medicine, Singapore General Hospital, Singapore. (4) Raffles Diabetes and Endocrine Centre, Raffles Hospital, Singapore. (5) Division of Nephrology, National University Health System, National University Hospital, Singapore. (6) Department of Medicine, University of California, San Francisco, USA.

ABSTRACT

The link between cholesterol levels and atherosclerotic cardiovascular disease (ASCVD) is well established. In Singapore, there is an increasing prevalence of risk factors for ASCVD. Like many Asian countries, Singapore's population is rapidly ageing and increasingly sedentary, which predisposes individuals to chronic health problems. Current international and local guidelines recommend statin therapy for the primary and secondary prevention of ASCVD. However, despite the effectiveness of statin therapy, some studies have highlighted that Asian patients with cardiovascular disease are not achieving target lipid goals. Furthermore, it is widely believed that the responses of Asians (both patients and physicians) to statin therapy are different from those of their Western counterparts. Experts convened in 2014 to determine the impact of current guidelines on clinical practice in Singapore. This review summarises the key findings and recommendations of these guidelines, and presents key principles to aid clinicians to manage the cardiovascular risk of their patients more effectively. [PubMed — in process]

READING 3 – EGGS AND BEYOND

Eckel RH. Eggs and beyond: is dietary cholesterol no longer important? Am J Clin Nutr. 2015;102:235–6. doi: 10.3945/ajcn.115.116905. PubMed PMID: 26178728.

DOI: 10.3945/ajcn.115.116905

Author information:
Eckel RH
Divisions of Endocrinology, Metabolism, and Diabetes and Cardiology, University of Colorado School of Medicine, University of Colorado, Aurora, CO, robert.eckel@ucdenver.edu.

ABSTRACT

The 2015 USDA Dietary Guidelines for Americans (http://www.health. gov/dietaryguidelines/2015.asp), have indicated that the evidence for dietary cholesterol restriction to lower total and LDL cholesterol is insufficient. In fact, the USDA guidelines state that "cholesterol is not considered a nutrient of concern for overconsumption." These statements about dietary cholesterol have provoked considerable reaction. The take home message is: Overall, some reservation is appropriate when claiming that dietary cholesterol is unimportant in modifying LDL cholesterol and the risk of CVD. Yet, the primary emphasis should be placed on dietary patterns wherein the overall diet is heart healthy, a setting in which more egg consumption is likely not harmful. Despite 50 y of science, a few better-done crossover studies to address the independent effect of dietary cholesterol in the setting of a heart-healthy lifestyle would be timely, with or without statin therapy on board. Nevertheless, when ordering an omelet, why not order an egg white omelet with plenty of vegetables, lean meat, and spices rather than one with 600 mg cholesterol? [PubMed — indexed for MEDLINE]

READING 4 – COMPARISON OF CARDIOVASCULAR CALCULATORS

Allan GM, Garrison S, McCormack J. Comparison of cardiovascular disease risk calculators. Curr Opin Lipidol. 2014;25:254–65. Review. PubMed PMID: 24977979.

DOI: 10.1097/MOL.0000000000000095.

Author information:
Allan GM(1), Garrison S, McCormack J.
(1) Evidence-Based Medicine, Department of Family Medicine, University of Alberta, Alberta bFaculty of Pharmaceutical Sciences, University of British Columbia, Vancouver, British Columbia, Canada.

ABSTRACT

PURPOSE OF REVIEW: The cardiovascular benefit of many preventive interventions (like statins) is strongly dependent on the baseline cardiovascular risk of the patient. Many lipid and vascular primary prevention guidelines advocate for the use of cardiovascular risk calculators.

RECENT FINDINGS: There are over 100 cardiovascular risk prediction models, and some of these models have spawned scores of calculators. Only about 25 of these models/calculators have been externally validated. The ability to identify who will have events frequently varies little (<5%) between models. However, disagreement between risk calculators is common with one in three paired comparisons disagreeing on risk category. In part, this disagreement is because calculators vary according to the database they are derived from, choice of clinical endpoints and risk interval duration upon which the estimate is based. Additional risk factors do little to improve the basic risk predictions performance, except perhaps coronary artery calcium which still requires further study before regular use.

SUMMARY: The estimates provided by cardiovascular risk calculators are ballpark approximations and have a margin of error. Physicians should use models derived from, or calibrated for, populations similar to theirs and understand the endpoints, duration, and special features of their selected calculator. [PubMed — indexed for MEDLINE]

READING 5 – ISOLATED SYSTOLIC HYPERTENSION — AFTER SPRINT

Bavishi C, Goel S, Messerli FH. Isolated Systolic Hypertension: An Update After SPRINT. Am J Med. 2016;129:1251–8.. Review. PubMed PMID: 27639873.

DOI: 10.1016/j.amjmed.2016.08.032

Author information:
Bavishi C(1), Goel S(2), Messerli FH(3).
(1) Department of Cardiology, Mount Sinai St. Luke's and Mount Sinai West Hospitals, New York, NY.
(2) Department of Cardiology, Mount Sinai St. Luke's and Mount Sinai West Hospitals, New York, NY; Department of Critical Care Medicine, Mayo Clinic, Rochester, Minn. (3) Department of Cardiology, Mount Sinai Health Medical Center, Icahn School of Medicine, New York, NY; University Hospital, Bern, Switzerland; Jagiellonian University, Krakow, Poland. Electronic address: messerli.f@gmail.com.

ABSTRACT

Isolated systolic hypertension is the most common hemodynamic form of hypertension in the elderly. With a rapidly aging population, the prevalence of hypertension, particularly isolated systolic hypertension, is expected to increase substantially. This phenomenon of increasing systolic pressure in the elderly is believed to be secondary to pathophysiological changes of aging as well as modifiable risk factors. Isolated systolic hypertension is associated with substantial mortality and morbidity, particularly of cerebrovascular disease. It is a rapidly growing public health concern and its management continues to remain a challenge to practicing physicians. Recent studies like the Systolic Blood Pressure Intervention Trial (SPRINT) and Heart Outcomes Prevention Evaluation (HOPE)-3 have implications for antihypertensive therapy in general and for the management of isolated systolic hypertension in particular. In this article we will review: 1) epidemiology and pathophysiologic mechanisms, 2) impact of isolated systolic hypertension on cardiovascular outcomes, 3) optimal management strategies, and 4) systolic blood pressure goals in the light of SPRINT and HOPE 3 trials. [PubMed — in process]

READING 6 – EFFICACY AND SAFETY OF ORAL NSAIDS AND ANALGESICS IN MANAGEMENT OF OSTEOARTHRITIS

Pelletier JP, Martel-Pelletier J, Rannou F, Cooper C. Efficacy and safety of oral NSAIDs and analgesics in the management of osteoarthritis: Evidence from real-life setting trials and surveys. Semin Arthritis Rheum. 2016;45:S22–7.

DOI:: 10.1016/j.semarthrit.2015.11.009. PubMed PMID: 26806184.

Author information:
Pelletier JP(1), Martel-Pelletier J(2), Rannou F(3), Cooper C(4).
(1) Osteoarthritis Research Unit, University of Montreal Hospital Research Centre (CRCHUM), Tour Viger, 900 St-Denis Street, Montreal, QC H2X 0A9, Canada. Electronic address: dr@jppelletier.ca. (2) Osteoarthritis Research Unit, University of Montreal Hospital Research Centre (CRCHUM), Tour Viger, 900 St-Denis Street, Montreal, QC H2X 0A9, Canada. (3) Rehabilitation Unit, Rheumatology Department, Hôpital Cochin, AP-HP, INSERM UMR-S 1124, Université Paris Descartes, Paris, France. (4) MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, UK; NIHR Musculoskeletal Biomedical Research Unit, University of Oxford, Oxford, UK.

ABSTRACT

Non-steroidal anti-inflammatory drugs (NSAIDs) are at the cornerstone of treatment for osteoarthritis (OA). In recent years, the widespread use of oral NSAIDs has been called into question due to the appearance of significant upper gastrointestinal (GI) complications and cardiovascular (CV) adverse events (AEs). However, NSAIDs are non-homogeneous, and there are noticeable differences between them in AE risk for GI and CV events. Nevertheless, if properly prescribed oral NSAIDs can provide an effective and safe treatment for OA in real-life situations. The identification of patients with significant CV and/or GI risk is critical, and the European Society for Clinical and Economic Aspects of Osteoporosis and Osteoarthritis (ESCEO) treatment algorithm provides guidance on appropriate treatments for OA patients with elevated risk. Among non-selective NSAIDs, ibuprofen and naproxen seem preferable to diclofenac, the latter being associated with higher CV risk. Recommendation has been made by some that naproxen may be the preferred agent in patients at high CV risk because of its lower risk of CV events. Low dose celecoxib (200mg/day) is also associated with a lower risk of CV events compared with other coxibs. In addition, drugs with a demonstrated low GI risk profile may be of benefit, such as coxibs and nabumetone. Among patients who fail to respond adequately to sequential ESCEO algorithm Step 1 and Step 2 treatments, the short-term use of weak opioids, such as tramadol, for severely symptomatic OA patients is recommended. Although studies exploring the efficacy of tramadol in OA are limited, there is good evidence that tramadol works if prescribed properly. The sustained-release (SR) formulation of tramadol is preferred as it avoids the peak plasma concentrations reached with immediate-release tramadol, and is believed to reduce the incidence of AEs. Furthermore, slow upwards titration of tramadol SR is recommended to improve tolerability and minimize treatment discontinuations. [PubMed — in process]

READING 7 – MUSCULOSKELETAL MANIFESTATIONS OF DIABETES MELLITUS

Merashli M, Chowdhury TA, Jawad AS. Musculoskeletal manifestations of diabetes mellitus. QJM. 2015 Nov;108(11):853-7. Review. PubMed PMID: 26025688.

DOI: 10.1093/qjmed/hcv106.

Author information:
Merashli M(1), Chowdhury TA(2), Jawad AS(1).
(1) Department of Rheumatology; and (2) Department of Diabetes and Metabolism, The Royal London Hospital, London E1 1BB, UK. Tahseen.Chowdhury@bartshealth.nhs.uk.

ABSTRACT

The prevalence of Type 1 and Type 2 diabetes are increasing significantly worldwide. Whilst vascular complications of diabetes are well recognized, and account for principle mortality and morbidity from the condition, musculoskeletal manifestations of diabetes are common and whilst not life threatening, are an important cause of morbidity, pain and disability. Joints affected by diabetes include peripheral joints and the axial skeleton. Charcot neuroarthropathy is an important cause of deformity and amputation associated with peripheral neuropathy. A number of fibrosing conditions of the hands and shoulder are recognized, including carpal tunnel syndrome, adhesive capsulitis, tenosynovitis and limited joint mobility. People with diabetes are more prone to gout and osteoporosis. Management of these conditions requires early recognition and close liaison between diabetes and rheumatology specialists. For Permissions, please email: journals.permissions@oup.com. [PubMed — indexed for MEDLINE]

READING 8 – PAINFUL DIABETIC NEUROPATHY

Didangelos T, Doupis J, Veves A. Painful diabetic neuropathy: clinical aspects. Handb Clin Neurol. 2014;126:53–61. Review. PubMed PMID: 25410214.

DOI: 10.1016/B978-0-444-53480-4.00005-9

Author information:
Didangelos T(1), Doupis J(2), Veves A(3).
(1) 1st Propedeutic Department of Internal Medicine, Medical School, Aristotle University of Thessaloniki, "AHEPA" Hospital, Greece. (2) Internal Medicine and Diabetes Department, Salamis Naval Hospital, Salamis, Greece. (3) Microcirculation Laboratory and Joslin-Beth Israel Deaconess Foot Center, Beth Israel Deaconess Medical Center and Harvard Medical School, Boston, MA, USA. Electronic address: aveves@bidmc.harvard.edu.

ABSTRACT

Painful diabetic neuropathy (PDN) is one of several clinical syndromes in patients with diabetic peripheral neuropathy (DPN) and presents a major challenge for optimal management. The epidemiology of PDN has not been extensively studied. On the basis of available data, the prevalence of pain ranges from 10% to 20% in patients with diabetes and from 40% to 50% in those with diabetic neuropathy. Neuropathic pain can be disabling and devastating, with a significant impact on the patient's quality of life and associated healthcare cost. Pathophysiologic mechanisms underlying PDN are similar to other neuropathic pain disorders and broadly invoke peripheral and central sensitization. The natural course of PDN is variable, with the majority of patients experiencing spontaneous improvement and resolution of pain. Quantifying neuropathic pain is difficult, especially in clinical practice, but has improved recently in clinical trials with the development of neuropathic pain-specific tools, such as the Neuropathic Pain Questionnaire and the Neuropathic Pain Symptom Inventory. Hyperglycemia-induced pathways result in nerve dysfunction and damage, which lead to hyperexcitable peripheral and central pathways of pain. Glycemic control may prevent or partially reverse DPN and modulate PDN. [PubMed — indexed for MEDLINE]

READING 9 – LOW TESTOSTERONE IN MEN WITH CARDIOVASCULAR DISEASE RISK OR RISK FACTORS — TO TREAT OR NOT TO TREAT

Cassimatis DC, Crim MT, Wenger NK. Low Testosterone in Men with Cardiovascular Disease or Risk Factors: To Treat or Not To Treat? Curr Treat Options Cardiovasc Med. 2016;18:75. Review. PubMed PMID: 27807794.

DOI: 10.1007/s11936-016-0496-0

Author information:
Cassimatis DC(1), Crim MT(2), Wenger NK(3).
(1) Grady Cardiology Offices, Emory University School of Medicine, 49 Jesse Hill Jr Dr. SE, Atlanta, GA, 30303, USA. dimitri.cassimatis@emory.edu. (2) Woodruff Memorial Research Building Suite 3004, Emory University School of Medicine, 101 Woodruff Circle, Atlanta, GA, 30322, USA. (3) Grady Cardiology Offices, Emory University School of Medicine, 49 Jesse Hill Jr Dr. SE, Atlanta, GA, 30303, USA.

ABSTRACT

Current evidence supports the use of testosterone replacement in men with the clinical-biochemical syndrome of hypogonadism, defined as low testosterone serum levels and symptoms such as fatigue, exercise intolerance, erectile dysfunction, low libido, or depression. Although the evidence consistently shows that hypogonadism is associated with elevated cardiovascular risk, evidence is mixed regarding whether testosterone (T) replacement provides cardiovascular (CV) benefit or harm. For a man with symptomatic hypogonadism in the setting of CV disease, clinical heart failure, and/or traditional CV risk factors (hypertension, diabetes, and hyperlipidemia), a balanced approach would be to counsel him that overall, the evidence should not dissuade him from utilizing T replacement for non-cardiac symptom relief but that more data are needed before a definitive recommendation can be made about T replacement for CV benefit. The preponderance of available evidence, reviewed in this article, suggests that T replacement, at appropriate doses and with monitored response, is likely to be safe for men with CV disease or CV risk factors and may even reduce major adverse cardiovascular events (MACE). The 2015 American Association of Clinical Endocrinologists and American College of Endocrinology position statement supports this stance and calls for improved prospective data. There is a clear need for a large, prospective randomized trial evaluating the impact of T replacement on MACE, for men both with and without CV disease or CV risk factors. Clinicians should be aware that all men who elect to take T replacement therapy require regular follow-up with the prescribing physician to include both clinical assessment and surveillance laboratory assessment of total T level, complete blood count, and prostate specific antigen. [PubMed — in process]

READING 10 – MODIFYING RISK FACTORS IN THE MANAGEMENT OF ERECTILE DYSFUNCTION

DeLay KJ, Haney N, Hellstrom WJ. Modifying Risk Factors in the Management of Erectile Dysfunction: A Review. World J Mens Health. 2016;34:89–100. PubMed PMID: 27574592; PubMed Central PMCID: PMC4999494.

DOI: 10.5534/wjmh.2016.34.2.89

Author information:
DeLay KJ(1), Haney N(1), Hellstrom WJ(1).
(1) Department of Urology, Tulane University School of Medicine, New Orleans, LA,
USA.

ABSTRACT

Erectile dysfunction (ED) is prevalent among men and its presence is often an indicator of systemic disease. Risk factors for ED include cardiovascular disease, hypertension, diabetes mellitus (DM), tobacco use, hyperlipidemia, hypogonadism, lower urinary tract symptoms, metabolic syndrome, and depression. Addressing the modifiable risk factors frequently improves a patient's overall health and increases lifespan. The literature suggests that smoking cessation, treatment of hyperlipidemia, and increasing physical activity will improve erectile function in many patients. How the treatment of DM, depression, and hypogonadism impacts erectile function is less clear. Clinicians need to be aware that certain antihypertensive agents can adversely impact erectile function. The treatment of men with ED needs to address the underlying risk factors to ameliorate the disease process. [PubMed]