MEDICAL UPDATES

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Egypt In Top Ten of diabetic countries

Bisphosphonates Associated With Reduced Breast Cancer Risk

Atorvastatin Beats Rosuvastatin

Egyphar Medical Updates

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PLANET I and II: Atorvastatin beats rosuvastatin for protecting kidneys in diabetic and nondiabetic patients

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Adapted from Medscape Medical News—a professional news service of WebMD

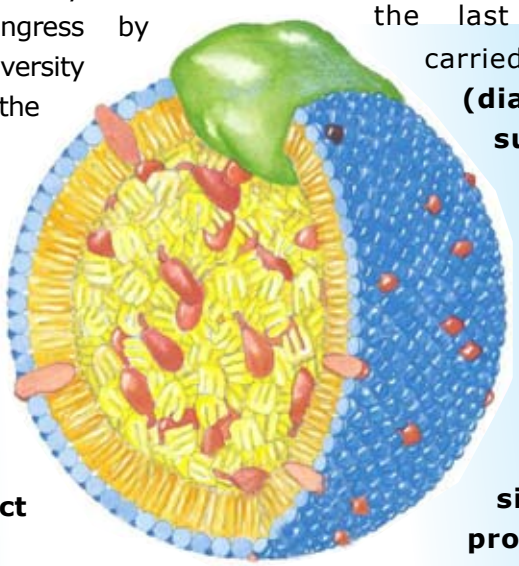
Munich, Germany - Results of two related trials investigating the effects of statins on urinary protein excretion and kidney function suggest that atorvastatin may be protective but that rosuvastatin seems to have no protective effects and in fact may be harmful. The different effects were seen in both diabetic and non diabetic patients..

According to results of the Prospective Evaluation of Proteinuria and Renal Function in Diabetic Patients With Progressive Renal Disease (PLANET I) and Prospective Evaluation of Proteinuria and Renal Function in Nondiabetic Patients With Progressive Renal Disease (PLANET II) trials, reported in a late-breaking trials session at the 2010 European Renal Association-European Dialysis and Transplant Association Congress by Dr.Dick de Zeeuw (University Medical Center in Groningen, the Netherlands).

High-dose atorvastatin significantly reduced proteinuria and did not affect renal function, whereas rosuvastatin was associated with a significant decline in function and had no effect on proteinuria.

In diabetic and nondiabetic patients, proteinuria is a risk factor for further loss of kidney function and progression to end-stage renal disease. Experimental results have suggested that statins reduce proteinuria and preserve kidney function, but clinical studies have produced mixed results The two randomized double-blind multinational PLANET trials tested the effects of atorvastatin 80 mg/day or rosuvastatin 10 or 40 mg/day on urinary protein excretion and renal function in hypercholesterolemic patients with moderate proteinuria.

The primary end point of the studies was the change in urinary protein/creatinine ratio from baseline to week 52 or to the last on-treatment observation carried forward. **For PLANET I (diabetic patients), de Zeeuw summarized: "Atorvastatin significantly reduces the proteinuria in these patients on top of ACE/ ARB therapy, with around a 15% reduction in proteinuria, whereas rosuvastatin, both 10 and 40 mg, had no significant effect at all on proteinuria."**



The effect of atorvastatin was evident by week 26 and continued through week 52, but neither rosuvastatin dose lowered proteinuria at either time point.

In PLANET II (the nondiabetic cohort), "we see a similar pattern, even more pronounced," he said. Atorvastatin reduced proteinuria by more than 20% at 26 and 52 weeks, but there was no significant effect with either dose of rosuvastatin. The results for albuminuria were very similar to those for proteinuria.

For estimated glomular filtration rate (eGFR), de Zeeuw said the results were "very surprising," in that in the PLANET I trial, patients on rosuvastatin lost more kidney function over 52 weeks than did those on atorvastatin.

Patients on atorvastatin lost about 1 to 2 mL/min per 1.73 m^2 over 52 weeks, those on rosuvastatin 10 mg/day lost about 4 mL/min per 1.73 m^2, and those on rosuvastatin 40 mg/day lost close to 8 mL/min per 1.73 m^2.

In nondiabetic patients (PLANET II), the effects of the treatments on kidney function were slightly less pronounced. There was a significant decline in eGFR with rosuvastatin 40 mg/day but not in the other two treatment groups.

de Zeeuw explained that the differential effects on proteinuria and eGFR in the treatment groups was not a result of differences in lipid lowering. All the treatments lowered total and LDL cholesterol, and there were no significant differences in the amount of lipid lowering.

All the treatments were well tolerated in both trials.

PLANET I: Summary of renal adverse events (%)

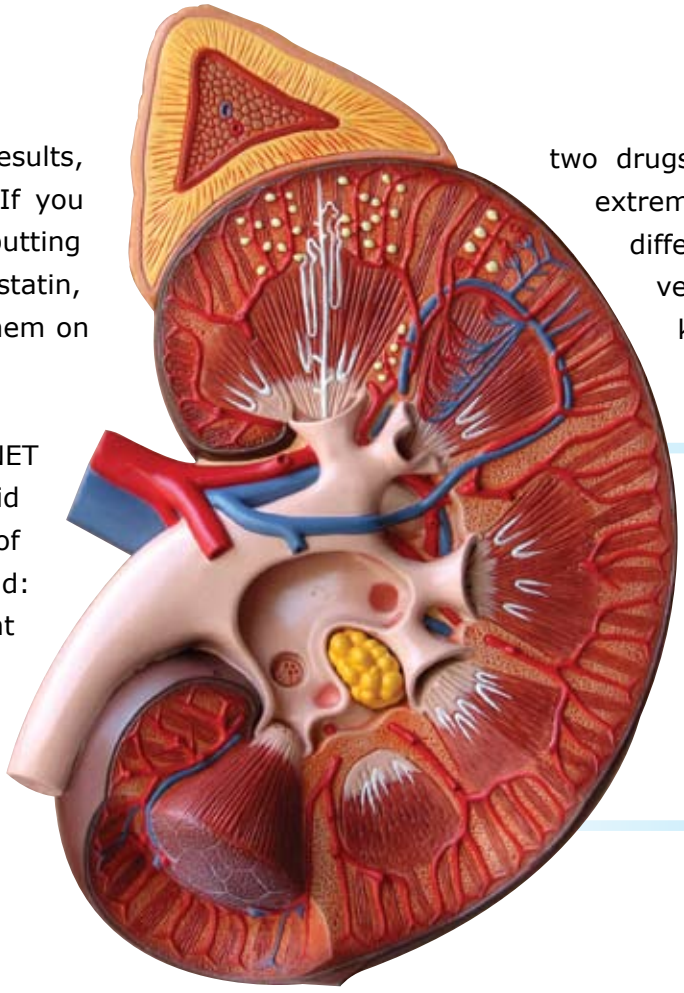
Adverse event	Rosuvastatin 10 mg/day (n = 116)	Rosuvastatin 40 mg/day (n = 123)	Atorvastatin 80 mg/day (n = 110)
Any renal adverse event	7.8	9.8	4.5
Acute renal failure	0.0	4.1	0.9
Serum creatinine doubling	0.0	4.9	0.0
Serum creatinine doubling or acute renal failure	0.0	7.3	0.9

de Zeeuw concluded from these findings that in diabetic and nondiabetic patients with proteinuria, using optimal therapy, including ACE inhibitors and ARBs:

- Atorvastatin 80 mg/day significantly reduced proteinuria by about 20%.
- Rosuvastatin 10 or 40 mg/day had no effect on proteinuria.
- Rosuvastatin 40 mg/day was associated with a significant decline in eGFR of about 8 mL/min per 1.73 m2 per year.
- Atorvastatin 80 mg/day had no effect on eGFR.
- Atorvastatin 80 mg/day has a clear advantage over rosuvastatin 40 mg/day in terms of renal protection and renal damage.

Based on the current results, de Zeeuw advised, "If you are considering putting such a patient on a statin, you should not put them on rosuvastatin."

Taking the two PLANET trials together, Dr David Harris (University of Sydney, Australia) said: "It's a very important study because it has dispelled the idea about class effects of statins and has shown that two drugs that we thought were extremely similar have very different effects and, clinically, very significant effects on kidney disease. . . .



It certainly would point any practicing nephrologist toward using atorvastatin rather than the other drug in this situation."

4 million good reasons for nobel prize 2010

October , 2010

It is hard to deny a scientist a Nobel Prize when there are 4 million good reasons.

In the case of Robert Edwards, PhD, who was awarded the 2010 Nobel Prize in medicine or physiology today, the reasons are roughly 4 million people born over the past 32 years due to the therapy he is being honored for — in vitro fertilization (IVF).

"The cheering in the background are the voices of 4 million babies who are thrilled to be alive," reproductive endocrinologist Alan Penzias, MD, a board member of the American Fertility Association told The British-born Dr. Edwards worked with the late gynecologist Patrick Steptoe, a British pioneer in laparoscopy, to take IVF from experiment to practical medicine, the Nobel Foundation states in its announcement. On July 25, 1978, the researchers' medical technology bore human fruit when Louise Joy Brown, the daughter of Lesley and John Brown, was the first "test-tube baby" to enter the world.

Dr. Steptoe died in 1988. The Nobel Foundation does not allow individuals to be nominated for a prize posthumously. Dr. Penzias, surgical director at a group practice called Boston IVF, said that if Dr. Steptoe were alive today, he would have shared today's Nobel Prize with Dr. Edwards.

"I think that's virtually certain," he said.
Dr. Edwards left another lasting mark on reproductive medicine by founding in 1980, along with Dr. Steptoe, the Bourn Hall Clinic in Cambridge, England, the first center for IVF therapy. Gynecologists and cell biologists from around the world have trained there, according to the Nobel Foundation.
Dr. Edwards is now professor emeritus at the University of Cambridge.

Success Rate of IVF Has Greatly Improved

IVF has made tremendous strides since its inception, according to Dr. Penzias.
In the early 1990s, IVF had a success rate of 10% to 12% per monthly attempt, said Dr. Penzias. Today, the success rate approaches 50%.

When put into the context of repeated monthly attempts, IVF looks even better. "A fertile woman under age 35 having unprotected sex has an 85% chance of getting pregnant within 1 year," said Dr. Penzias. "A woman under age 35 who undergoes 6 IVF attempts has the same odds.

"Once we knew the basic formula for IVF, it set off a worldwide effort to improve the technology."
Likewise, fertility specialists have extended the scope of IVF. "The first class of women treated with IVF had missing or damaged fallopian tubes," said Dr. Penzias. "Now IVF is used for all sorts of infertility problems."

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International Diabetes Federation

Diabetes mellitus in Egypt: risk factors and prevalence

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ABSTRACT

Major sociodemographic changes have occurred in Egypt to promote the development of noncommunicable diseases. We have performed a cross-sectional, population-based survey of persons > or = 20 years of age in Cairo and surrounding rural villages to describe the prevalence of diabetes risk factors, diagnosed diabetes, previously undiagnosed diabetes, and impaired glucose tolerance by age, sex, rural and urban residence, and socioeconomic status (SES). In the survey, we identified 6052 eligible households: 76% of household respondents completed a household examination and 72% of selected household respondents subsequently completed a medical examination.

Exercise was assessed by questionnaire; adiposity by measurement of height, weight, and girths; and diabetes by history and 2-h 75 g oral glucose tolerance test. In rural areas, 52% of persons > or = 20 years of age were sedentary, 16% were obese, and 4.9% had diabetes. In lower SES urban areas, 73% were sedentary, 37% were obese, and 13.5% had diabetes. In higher SES urban areas, 89% were sedentary, 49% were obese, and 20% had diabetes.

Conclusion

The combined prevalence of diagnosed and undiagnosed diabetes in the

Egyptian population > or = 20 years of age was estimated to be 9.3%. Approximately half the diabetes was diagnosed and the other half was previously undiagnosed. The prevalence of diabetes in Egypt is high, and the gradient in risk factors and disease from rural to urban areas and in urban areas from lower to higher SES suggest that diabetes is a major, emerging clinical and public health problem in Egypt.

Top 10 countries in prevalence of diabetes* (20-79 age group)

	2007			2025	
	Country	Prevalence (%)		Country	Prevalence (%)
1	Nauru	30.7	1	Nauru	32.3
2	United Arab Emirates	19.5	2	United Arab Emirates	21.9
3	Saudi Arabia	16.7	3	Saudi Arabia	18.4
4	Bahrain	15.2	4	Bahrain	17.0
5	Kuwait	14.4	5	Kuwait	16.4
6	Oman	13.1	6	Tonga	15.2
7	Tonga	12.9	7	Oman	14.7
8	Mauritius	11.1	8	Mauritius	13.4
9	Egypt	11.0	9	Egypt	13.4
10	Mexico	10.6	10	Mexico	12.4

Top 10 countries in number of people with diabetes (20-79 age group)

	2007			2025	
	Country	Prevalence (%)		Country	Prevalence (%)
1	India	40.9	1	India	69.9
2	China, People's Republic of	39.8	2	China, People's Republic of	59.3
3	USA	19.2	3	USA	25.4
4	Russia	9.6	4	Brazil	17.6
5	Germany	7.4	5	Pakistan	11.5
6	Japan	7.0	6	Mexico	10.9
7	Pakistan	6.9	7	Russia	10.3
8	Brazil	6.9	8	Germany	8.1
9	Mexico	6.1	9	Egypt	7.6
10	Egypt	4.4	10	Bangladesh	7.4

80% of chronic diseases occur in low and middle income countries

World Health Organization

Heart disease, stroke, cancer, hypertension, diabetes and other chronic diseases are often thought to be public health issues only for high income countries. In reality, only 20% of chronic disease deaths occur in high income countries – while 80% occur in low and middle income countries, where most of the world's population lives. Moreover, as described in detail in the WHO publication Preventing chronic diseases: a vital investment, the impact of chronic diseases in many low and middle income countries is steadily growing.

Consider that:

In low and middle income countries, around 28 million people will die in 2005 from a chronic disease. Cardiovascular disease alone will kill five times as many people as HIV/AIDS in these countries.

In low and middle income countries, middle-aged adults are especially vulnerable to chronic disease. People in these countries tend to develop disease at younger ages, suffer longer, and die sooner than those in high income countries. This undermines countries' economic development.

Why is this happening?

Low and middle income countries are at the centre of old and new public health challenges. While many have unfinished agendas around infectious diseases, at the same time they are experiencing a rapid upsurge in chronic diseases, especially in urban settings. The projected increase in the burden of chronic diseases in these countries is largely driven by the underlying determinants of globalization, urbanization, and rapid population ageing. These determinants in turn contribute to the common chronic disease risk factors of unhealthy diet, physical inactivity, and tobacco use.

What can be done?

A full range of chronic disease interventions are very cost-effective for all regions of the world, including sub-Saharan Africa. Many of these solutions are not only very cost-effective, they are also inexpensive to implement.

WHO has developed a comprehensive public health approach for helping low and middle income countries to implement chronic disease policies and programmes in a stepwise manner: the WHO Stepwise Framework. This framework is described in detail in Part Four of the WHO publication Preventing chronic diseases: a vital investment.

In low income countries, it is vital that supportive policies are in place now to reduce risks and curb the chronic disease epidemics before they take hold. In countries with established chronic disease problems, additional measures will be required, not only to prevent disease, but also to manage illness and disability.

Barriers to health care

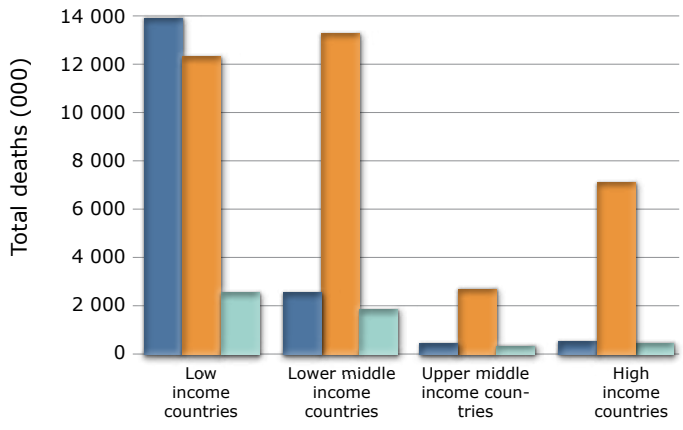
Maria Saloniki can hardly remember how many times she went to the local traditional healer, how many doctors in clinics and dispensaries she consulted between two hospitalizations, how many words she used to describe her pain. But one thing she clearly remembers is that each time she returned home without receiving adequate treatment and care.

Today, this livestock keeper and mother of 10 children is fighting for her life at the Ocean Road Cancer Institute in Dar es Salaam. It took Maria more than three years to discover the words to describe her pain – breast cancer – and to receive the treatment she desperately needs. "It all started with a swollen armpit and a bad fever," she recalls.

In fact, between these first symptoms and chemotherapy treatment, Maria was prescribed herb ointments on several occasions, has been on antibiotics twice and heard from more than one health professional that they couldn't do anything for her. The 60-year-old even travelled to Nairobi, Kenya to seek treatment, but it wasn't until later, in Dar es Salaam, that a biopsy revealed her disease.

Maria's story is sadly common in the understaffed and poorly equipped hospital ward she shares with 30 other cancer patients. Her husband, who now works day and night to pay for her medicine and feed their children, can't afford both the treatment costs and the bus fare to come and visit her. The family has one year to pay back a substantial loan to its tribe.

Projected deaths by major cause **and**
World Bank income group, all ages, 2005



* Chronic diseases include cardiovascular diseases, cancers, chronic respiratory disorders, diabetes, neuropsychiatric and sense organ disorders, musculoskeletal and oral disorders, digestive diseases, genito-urinary diseases, congenital abnormalities and skin diseases.

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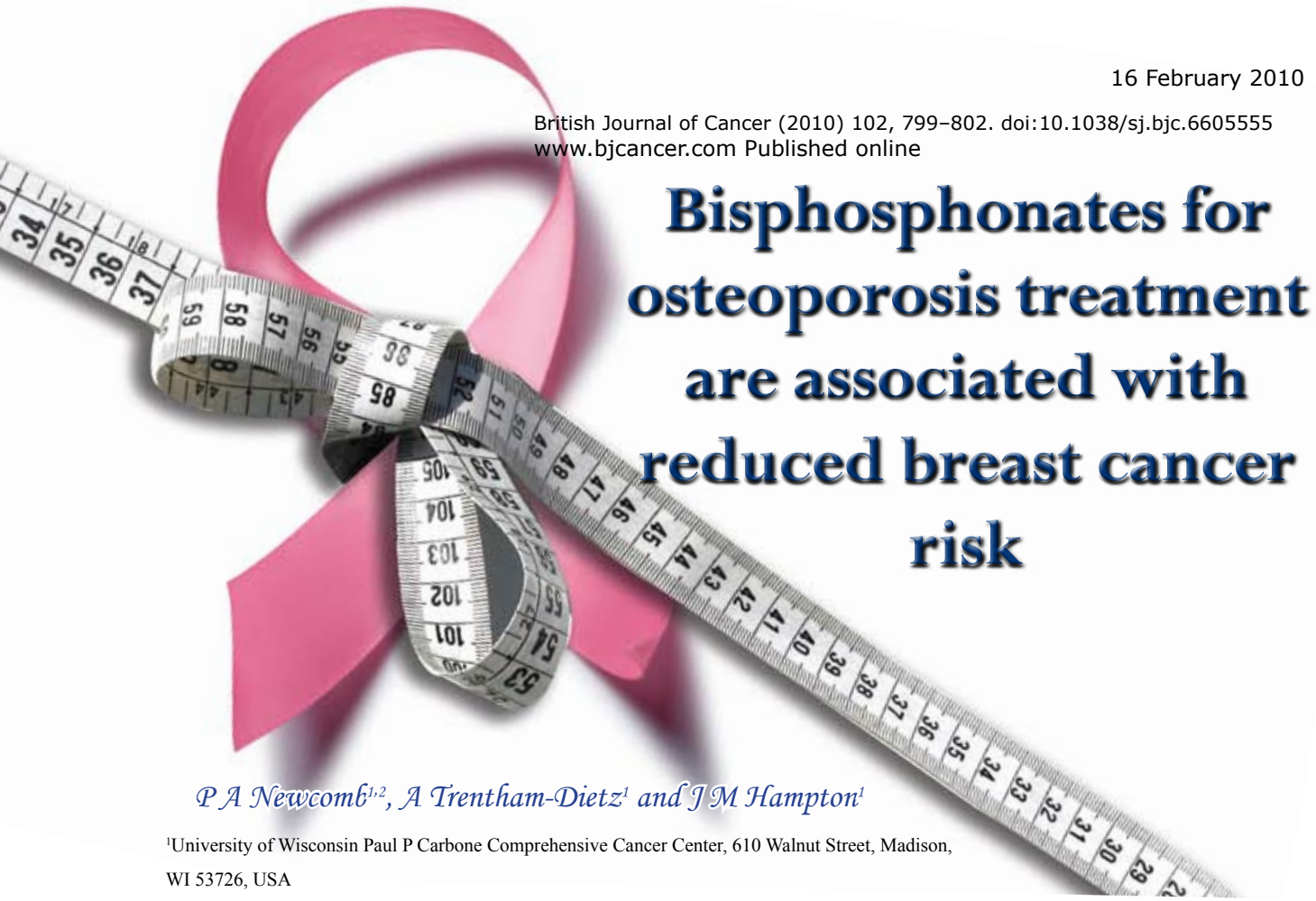
Bisphosphonates for osteoporosis treatment are associated with reduced breast cancer risk



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Abstract

Background:

Bisphosphanates are used primarily for the prevention and treatment of osteoporosis, and are also indicated for osseous complications of malignancy. In addition to their bone resorption properties, the most commonly used nitrogen-containing bisphosphonate compounds also inhibit protein prenylation, and thus may exert anti-tumour properties.

Methods:

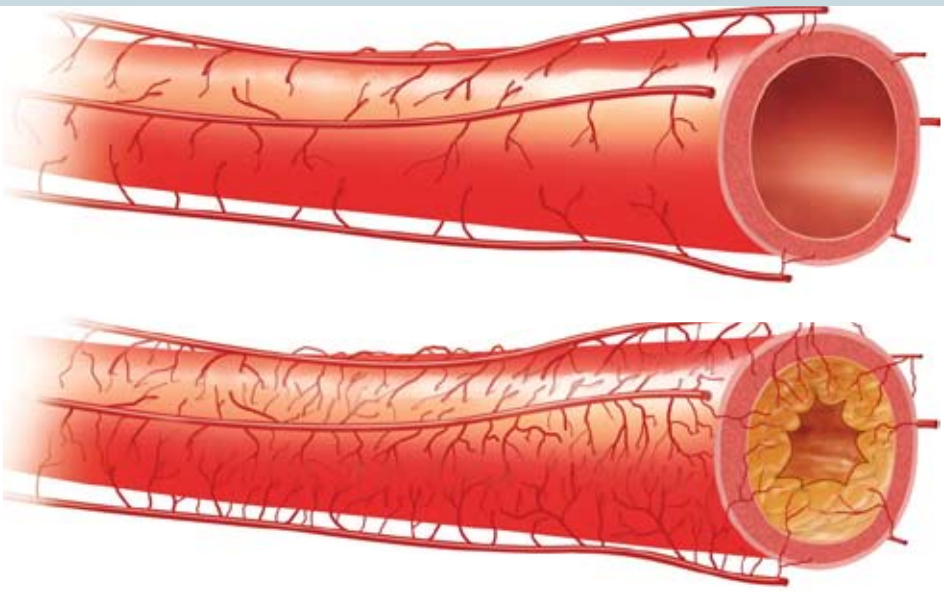
To evaluate whether the use of these drugs may be associated with cancer, specifically breast cancer, we conducted a population-based case–control study in Wisconsin from 2003 to 2006. Participants included 2936 incident invasive breast cancer cases and 2975 population controls aged <70 years. Bisphosphonate use and potential confounders were assessed by interview.

Results:

Using multivariable logistic regression, the odds ratio for breast cancer in current bisphosphonate users compared with non-users was 0.67 (95% confidence interval 0.51–0.89). Increasing duration of use was associated with a greater reduction in risk (P-trend=0.01). Risk reduction was observed in women who were not obese (P-interaction=0.005).

Conclusion:

These results are suggestive of an additional benefit of the common use of bisphosphonates, in this instance, the reduction in breast cancer risk.



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Lacidipine has antiatherosclerotic effects independent of its actions on lipid metabolism and blood pressure

Abstract

The antiatherosclerotic effect of lacidipine has been attributed to its actions on cholesterol levels, lipid metabolism or oxidant stress in advanced disease. The purpose of the present experiments was to examine whether lacidipine is protective of intimal thickening and vascular dysfunction in early atherosclerosis in the absence of the hypertension and hypercholesterolemia. A second goal was to determine whether and to what extent MMP-9 and oxidant stress are involved in possible beneficial effects of lacidipine. Lacidipine treatment (5mg/kg/day, p.o. for 3weeks) significantly prevented the collar-induced intimal thickening. MMP-9 expressions were increased by collar but not effected by lacidipine treatment. Nitrotyrosine staining, a marker for oxidant stress was not changed neither by collar nor lacidipine treatment in early atherosclerosis. The enhanced sensitivity to serotonine and diminished sensitivity to acetylcholine in collared arteries were restored to normal levels with treatment. These results demonstrate that the lacidipine treatment prevents the collar-induced intimal thickening and accompanying vascular dysfunction in early atherosclerosis without cholesterol loading. These beneficial effects of lacidipine were not associated with changes in either MMP-9 expression or oxidant stress. However, enhanced endothelium-dependent relaxations by lacidipine, suggest that vascular protective effects of nitric oxide may be at least partly, responsible from antiatherosclerotic effects of lacidipine.

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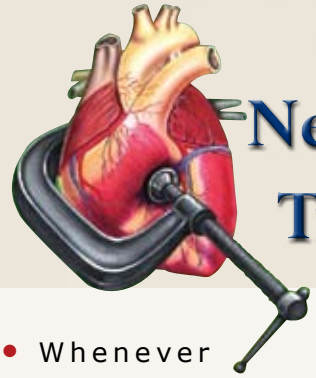

Journal of Hypertension06/20/2009

New European Guidelines on Treatment of Hypertension

the European Society of Hypertension

- Whenever appropriate, all patients, including those who need drug treatment, should use lifestyle measures to lower BP, to control other risk factors, and to reduce the number of doses of antihypertensive drugs needed. To reduce the risk of developing hypertension, lifestyle measures are also advisable in subjects with high-normal BP and additional risk factors.

- Lifestyle measures that are widely recognized to lower BP or cardiovascular risk and that should be considered are smoking cessation, weight reduction and maintenance, reduction of excessive alcohol intake, physical exercise, reduction of salt intake, increases in fruit and vegetable intake, and decreases in saturated and total fat intake. These recommendations should be given with adequate behavioral and expert support and reinforced periodically.

- Long-term compliance with lifestyle measures is low and BP response highly variable, so patients receiving nonpharmacologic treatment should be followed up closely to start drug treatment when needed.

- Primary benefits of antihypertensive therapy are related to BP reduction. 5 major classes of antihypertensive agents used alone or in combination to begin or maintain antihypertensive treatment are (1) thiazide diuretics, (2) calcium antagonists, (3) angiotensin-converting enzyme (ACE) inhibitors, (4) angiotensin receptor antagonists (ARBs), and (5) β-blockers.

- β-blockers, especially when combined with a thiazide diuretic, should not be used in patients with metabolic syndrome or at high risk for incident diabetes.

- Many patients need more than 1 drug, so emphasis on identifying first class of drugs to be used is often futile. However, there are many conditions for which there is evidence favoring some drugs either as initial treatment or as part of combination therapy.

- Factors affecting choice of specific drug or drug combination may include previous experience of individual patient with given drug class; effect of drugs on cardiovascular risk factors in relation to cardiovascular risk profile of individual patient; presence of subclinical organ damage, clinical cardiovascular disease, renal disease, or diabetes; presence of other disorders limiting use of particular drug classes; possible interactions with drugs used for other conditions; cost; adverse effects; BP-lowering effect lasting 24 hours; and once-aday administration favoring compliance.

- Regardless of which drug is used, monotherapy achieves BP target in only a limited number of patients, and most patients require combination therapy. Initial treatment can be with monotherapy or combination of 2 drugs at low doses, with a subsequent increase in drug doses or number, if needed. A combination of 2 drugs at low doses is preferred as first-step treatment when initial BP is in grade 2 or 3 range or total cardiovascular risk is high or very high. Fixed combinations of 2 drugs can simplify treatment schedule and favor compliance.