
¿Somos esclavos de los niveles de LDL?

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Director de la UGC de Farmacia
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Junio 14**

Áreas de incertidumbre y controversia



1.- Es que unas estatinas son mejores que otras...

2.- ...las estatinas de marca son mejores que las genéricas

3.- Hay unas cifras objetivo de cLDL que hay que alcanzar...

4.- ...no tengo tiempo para hacer educación para la salud o hacer un enfoque multifactorial de la enfermedad cardiovascular.

5.- No sirve de nada insistirle al paciente que deje de fumar, haga ejercicio, pierda peso...

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¿De dónde proceden las recomendaciones actuales?





NCEP-ATP III

1. Therapeutic Approaches to LDL Cholesterol Lowering in Persons with CHD or CHD Risk Equivalents

Subcategory of LDL Cholesterol Level	LDL Cholesterol Goal	Level at Which to Initiate Therapeutic Lifestyle Changes (TLC)	Level at Which to Initiate LDL-Lowering Drugs
≥130 mg/dL	<100 mg/dL	≥100 mg/dL	Start drug therapy simultaneously with dietary therapy
100–129 mg/dL	<100 mg/dL	≥100 mg/dL	Consider drug options*
<100 mg/dL	<100 mg/dL	TLC & emphasize weight control and physical activity	LDL-lowering drugs not required

* †CHD risk equivalents include clinical manifestations of noncoronary forms of atherosclerotic disease (peripheral arterial disease, abdominal aortic aneurysm, and carotid artery disease [transient ischemic attacks or stroke of carotid origin or >50% obstruction of a carotid artery]) diabetes and 2+ risk factors with 10-year risk for hard CHD >20%.

Tabaco

HTA

? HDL

AF Precoz

Table VI.1–3. Drug Therapy Consideration and Goals of Therapy for Primary Prevention

Risk Category	10-Year Risk for CHD	LDL cholesterol	
		Level at Which to Consider Drug Therapy	Primary Goal of Therapy
Multiple (2+) risk factors	>20% (includes all CHD Risk Equivalents*)	>100 mg/dL [†]	<100 mg/dL
	10–20%	≥130 mg/dL [‡]	<130 mg/dL
	<10%	≥160 mg/dL	<130 mg/dL
0–1 risk factor	<10%	≥190 mg/dL [§]	<160 mg/dL

Soc Española de Cardiología

liol. 2011;64(12):1168.e1-e60

13

Tabla 7

Recomendaciones para el análisis de lípidos para establecer los objetivos del tratamiento en la prevención de las enfermedades cardiovasculares

Recomendaciones	Clase ^a	Nivel ^b	Referencias
Se recomienda el cLDL como objetivo de tratamiento	I	A	15, 16, 17
Debe considerarse el CT como objetivo de tratamiento si no se dispone de otros análisis	Ila	A	5, 15

Cholesterol Treatment Trialists' (CTT) Collaboration. Efficacy and safety of more intensive lowering of LDL cholesterol: a meta-analysis of data from 170 000 participants in 26 randomised trials. Lancet. 2010;376:1670-81.

Methods

We undertook meta-analyses of individual participant data from randomised trials involving at least 1000 participants and at least 2 years' treatment duration of more versus less intensive statin regimens (five trials; 39 612 individuals; median follow-up 5·1 years) and of statin versus control (21 trials; 129 526 individuals; median follow-up 4·8 years).

Efficacy and safety of more intensive lowering of LDL cholesterol: a meta-analysis of data from 170 000 participants in 26 randomised trials

■ Cholesterol Treatment Trialists' (CTT) Collaboration* www.thelancet.com Vol 376 November 13, 2010

Summary

Background Lowering of LDL cholesterol with standard statin regimens reduces the risk of occlusive vascular events in a wide range of individuals. We aimed to assess the safety and efficacy of more intensive lowering of LDL cholesterol with statin therapy.

Methods We undertook meta-analyses of individual participant data from randomised trials involving at least 1000 participants and at least 2 years' treatment duration of more versus less intensive statin regimens (five trials; 39 612 individuals; median follow-up 5.1 years) and of statin versus control (21 trials; 129 526 individuals; median follow-up 4.8 years). For each type of trial, we calculated not only the average risk reduction, but also the average risk reduction per 1.0 mmol/L LDL cholesterol reduction at 1 year after randomisation.

Findings In the trials of more versus less intensive statin therapy, the weighted mean further reduction in LDL cholesterol at 1 year was 0.51 mmol/L. Compared with less intensive regimens, more intensive regimens produced a highly significant 15% (95% CI 11–18; $p < 0.0001$) further reduction in major vascular events, consisting of separately significant reductions in coronary death or non-fatal myocardial infarction of 13% (95% CI 7–19; $p < 0.0001$), in coronary revascularisation of 19% (95% CI 15–24; $p < 0.0001$), and in ischaemic stroke of 16% (95% CI 5–26; $p = 0.005$). Per 1.0 mmol/L reduction in LDL cholesterol, these further reductions in risk were similar to the proportional reductions in the trials of statin versus control. When both types of trial were combined, similar proportional reductions in major vascular events per 1.0 mmol/L LDL cholesterol reduction were found in all types of patient studied (rate ratio [RR] 0.78, 95% CI 0.76–0.80; $p < 0.0001$), including those with LDL cholesterol lower than 2 mmol/L on the less intensive or control regimen. Across all 26 trials, all-cause mortality was reduced by 10% per 1.0 mmol/L LDL reduction (RR 0.90, 95% CI 0.87–0.93; $p < 0.0001$), largely reflecting significant reductions in deaths due to coronary heart disease (RR 0.80, 99% CI 0.74–0.87; $p < 0.0001$) and other cardiac causes (RR 0.89, 99% CI 0.81–0.98; $p = 0.002$), with no significant effect on deaths due to stroke (RR 0.96, 95% CI 0.84–1.09; $p = 0.5$) or other vascular causes (RR 0.98, 99% CI 0.81–1.18; $p = 0.8$). No significant effects were observed on deaths due to cancer or other non-vascular causes (RR 0.97, 95% CI 0.92–1.03; $p = 0.3$) or on cancer incidence (RR 1.00, 95% CI 0.96–1.04; $p = 0.9$), even at low LDL cholesterol concentrations.

Interpretation Further reductions in LDL cholesterol safely produce definite further reductions in the incidence of heart attack, of revascularisation, and of ischaemic stroke, with each 1.0 mmol/L reduction reducing the annual rate of these major vascular events by just over a fifth. There was no evidence of any threshold within the cholesterol range studied, suggesting that reduction of LDL cholesterol by 2–3 mmol/L would reduce risk by about 40–50%.

Funding UK Medical Research Council, British Heart Foundation, European Community Biomed Programme, Australian National Health and Medical Research Council, and National Heart Foundation.



Tabla 8

Recomendaciones para los objetivos del tratamiento para el cLDL

Recomendaciones	Clase ^a	Nivel ^b	Referencias
En pacientes con riesgo CV muy alto (ECV establecida, diabetes mellitus tipo 2, diabetes mellitus tipo 1 con lesión de órganos diana, ERC moderada o grave o un nivel SCORE $\geq 10\%$), el objetivo para el cLDL es $<1,8$ mmol/l (menos de -70 mg/dl) y/o una reducción $\geq 50\%$ del cLDL cuando no pueda alcanzarse el objetivo	I	A	15, 32, 33
En pacientes con riesgo CV alto (factores individuales de riesgo muy elevados, un nivel SCORE ≥ 5 a $<10\%$), se considerará un objetivo para el cLDL $<2,5$ mmol/l (menos de -100 mg/dl)	IIa	A	15-17

¿Somos esclavos de los niveles?

cLDL: colesterol unido a lipoproteínas de baja densidad; CV: cardiovascular; ECV: enfermedad cardiovascular; ERC: enfermedad renal crónica. ^aClase de recomendación. ^bNivel de evidencia.

¿Cómo tratáis a ?

Pedro (no fumador, sigue dieta, delgado,,,que acaba de tener un sca y tiene un LDL basal de 190
IECA + BB + Doble antiagregación (1 año como mucho) + ¿Qué estatina?

Dosis potente: y a los 2 meses tiene un LDL de 105
(-45%)

Si te has planteado cambiar de estatina, tras hacerlo ves que siguen así los niveles

Luis que acaba de tener un sca y tiene un LDL
basal de 190

IECA + BB + Doble antiagregación (1 año como
mucho) + dosis potente de estatina

: y a los 2 meses tiene un LDL de 85 (-55%)

Pero al año le suben las transaminasas,,,y
decides prudentemente bajar la dosis de estatina

Y te quedas como Pedro en ese 105...

¿Asocias ?

¿Cómo tratáis a ?

Paciente que acaba de tener un sca y tiene un LDL basal de 210

IECA + BB + Doble antiagregación (1 año como mucho) + dosis potente: y a los 2 meses tiene un LDL de 115 (-45%)

O que al año por intolerancia, tras haber alcanzado “objetivos” (95 mg/dL-55%) pasa a esa situación de 115 mg/dL(-45%)

¿Cómo tratáis a ?

Paciente que acaba de tener un sca y tiene un LDL basal de 170

IECA + BB + Doble antiagregación (1 año como mucho) + estatina potente

: y a los 2 meses tiene un LDL de 93 (-45%)

O que al año por intolerancia y bajar dosis, tras haber alcanzado “objetivos” (75 mg/dL-55%) pasa a esa situación de 93 mg/dL(-45%)

Artículo especial

Este artículo completo solo se encuentra disponible en versión electrónica: www.revespcardiol.org

Guía europea sobre prevención de la enfermedad cardiovascular en la práctica clínica (versión 2012)

Recomendaciones para el manejo de la hiperlipemia

Recomendaciones	Clase ^a	Nivel ^b	GRADE	Ref.
Los objetivos recomendados son: <5 mmol/l (menos de ~190 mg/dl) para el colesterol total y <3 mmol/l (menos de ~115 mg/dl) para el cLDL en personas de riesgo bajo o moderado	I	A	Fuerte	457,458
En pacientes con riesgo elevado de ECV, se recomienda un objetivo para el cLDL <2,5 mmol/l (menos de ~100 mg/dl)	I	A	Fuerte	459-461
En pacientes con riesgo muy alto de ECV, se recomienda un objetivo para el cLDL <1,8 mmol/l (menos de ~70 mg/dl) o una reducción ≥50% del cLDL cuando no se logre alcanzar el objetivo recomendado	I	A	Fuerte	459,462, 463
A todos los pacientes con hipercolesterolemia familiar se los debe considerar pacientes de alto riesgo y deben recibir tratamiento hipolipemiente	I	A	Fuerte	464,465
En pacientes con SCA, debe iniciarse tratamiento con estatinas a dosis altas durante el ingreso hospitalario	I	A	Fuerte	466-468
Prevención del ictus no hemorrágico: el tratamiento con estatinas debe iniciarse en todos los pacientes con enfermedad aterosclerótica establecida y en pacientes con riesgo muy alto de sufrir ECV. Los pacientes con historia de ictus isquémico no cardioembólico deben iniciar tratamiento con estatinas	I	A	Fuerte	469,470
La enfermedad arterial oclusiva de las extremidades inferiores y la enfermedad de las arterias carótidas son equivalentes de riesgo coronario y se debe tratarlas con fármacos hipolipemiantes	I	A	Fuerte	471,472
Las estatinas deben ser consideradas tratamiento de primera línea para pacientes trasplantados que presentan dislipemias	IIa	B	Fuerte	473
La enfermedad renal crónica (grados 2-5, es decir, una TFGe <90 ml/min/1,73 m ²) se considera equivalente de riesgo coronario, y el objetivo para el cLDL en estos pacientes debe adaptarse al grado de insuficiencia renal	IIa	C	Fuerte	474

ECV: enfermedad cardiovascular; LDL: lipoproteínas de baja densidad; Ref.: referencias; SCA: síndrome coronario agudo; TFGe: tasa de filtrado glomerular estimada.

^aClase de recomendación.

^bNivel de evidencia.

Lo que dicen las Guías ...

Prevención 1ª

*National Institute for
Health and Clinical Excellence*

No hay niveles objetivo de CT o LDLc en Prevención Primaria.

No sería necesario repetir perfiles, revisiones según juicio clínico y preferencias

No hay **ningún ensayo clínico en prevención primaria** que haya evaluado los **beneficios relativos y absolutos del descenso de colesterol total y LDL** hasta determinados objetivos en relación a los eventos clínicos.

Además, la efectividad clínica de la **terapia intensiva** con estatinas y de combinar estatinas con otros hipolipemiantes **tiene que ser demostrado** todavía para la **Prevención Primaria**.

Se decidió que debido a la **falta de evidencia**, **esta Guía no recomendaría** el uso de niveles objetivo de colesterol para las personas de alto riesgo de ECV. Esto es discutido más adelante en la terapia farmacológica de la prevención secundaria.

Recomendaciones sobre inicio de tratamiento hipolipemiante

Proponen Cifras Objetivo pero sólo con estatinas: No con combinaciones

Recomendaciones sobre inicio de tratamiento hipolipemiante			
Grupos de trabajo en prevención CV	Criterio	Objetivos	Indicación de tratamiento farmacológico
Proceso Asistencial Integrado de Riesgo Vascular. Plan Integral Cardiopatía Isquémica	Prevención secundaria	LDL-c <100 mg/dl	LDL-c >130 mg/dl
	Prevención primaria		
	RCV alto	LDL-c <130 mg/dl	LDL-c >160 mg
	RCV moderado	LDL-c <160 mg/dl	LDL-c >190 mg/dl
National Institute for Health and Clinical Excellence(NICE)	Prevención Primaria	No se recomienda fijar objetivo para el CT ó LDL-c	Independientemente de los niveles de c-LDL
	Prevención secundaria	CT <156 mg/dl	
		LDL-c <80 mg/dl	
Osakidetza y Departamento de Sanidad del País Vasco	Prevención secundaria	Con las evidencias disponibles, no se pueden establecer cifras objetivo de LDL-c a alcanzar	Independientemente de los niveles de c-LDL
	Prevención Primaria		Indicación de tratamiento realizada tras intervención sobre otros factores de RCV (obesidad, HTA, tabaquismo). Si RCV moderado y presencia de factores de RCV no modificables o si CT ₁₆ ≥ 320mg/dl y/o LDL-c >240 mg/dl, iniciar de tratamiento.
	RCV alto		
	RCV moderado		



Circulation. published online November 12, 2013

Prevención 1^a

cLDL 70-189 mg/dL
?RCV

cLDL =190 mg/dL
RCV

Diabéticos 40-75 años
cLDL 70-189 mg/dL(*)

(*) Posiblemente de alta intensidad si ?RCV **2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines**

Prevención 2^a

ECV establecida
<75 años

ECV establecida
=75 años

Intensidad moderada

Atorvastatina (10-20 mg)
Pravastatina (40-80 mg)
Rosuvastatina (5-10 mg)
Simvastatina (20-40 mg)

Alta intensidad

Atorvastatina (40-80 mg)
Rosuvastatina (20-40 mg)



- ☐ Guía diseñada para reemplazar al ATP III
- ☐ No podemos asumir que modificar el FR implique modificar el riesgo
- ☐ Los EECC han demostrado repetidamente que las estatinas disminuyen el Riesgo vascular...otros medicamentos no
- ☐ La determinación de lípidos tendrá como objetivo evaluar la adherencia, no comprobar si se consiguen o no unos objetivos



Veamos las pruebas



From: [BMJ. 2003 June 28; 326\(7404\): 1423.](#)

doi: [10.1136/bmj.326.7404.1423](#)

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Table 2

Absolute reductions* (mmol/l) (with 95% confidence intervals) and percentage reductions[‡] in serum LDL cholesterol concentration according to statin and daily dose (summary estimates from 164 randomised placebo controlled trials)

Statin	Daily dose (mg)				
	5	10	20	40	80
Atorvastatin	1.51 (1.28 to 1.74), 31%	1.79 (1.62 to 1.97), 37%	2.07 (1.90 to 2.25), 43%	2.36 (2.12 to 2.59), 49%	2.64 (2.31 to 2.96), 55%
Fluvastatin	0.46 (0.18 to 0.75), 10%	0.74 (0.55 to 0.93), 15%	1.02 (0.90 to 1.13), 21%	1.30 (1.19 to 1.41), 27%	1.58 (1.40 to 1.76), 33%
Lovastatin	—	1.02 (0.71 to 1.34), 21%	1.40 (1.21 to 1.59), 29%	1.77 (1.60 to 1.94), 37%	2.15 (1.86 to 2.43), 45%
Pravastatin	0.73 (0.54 to 0.92), 15%	0.95 (0.83 to 1.07), 20%	1.17 (1.10 to 1.23), 24%	1.38 (1.31 to 1.46), 29%	1.60 (1.46 to 1.74), 33%
Rosuvastatin	1.84 (1.74 to 1.94), 38%	2.08 (1.98 to 2.18), 43%	2.32 (2.20 to 2.44), 48%	2.56 (2.42 to 2.70), 53%	2.80 (2.63 to 2.97), 58%
Simvastatin	1.08 (0.93 to 1.22), 23%	1.31 (1.22 to 1.40), 27%	1.54 (1.46 to 1.63), 32%	1.78 (1.66 to 1.90), 37%	2.01 (1.83 to 2.19), 42%

*Absolute reductions are standardised to usual serum LDL cholesterol concentration of 4.8 mmol/l before treatment (mean concentration in trials).

[‡]Percentage reductions are independent of pretreatment LDL cholesterol concentration; 95% confidence intervals on percentage reductions can be derived by dividing those on absolute reductions by 4.8.

Teoría Log lineal

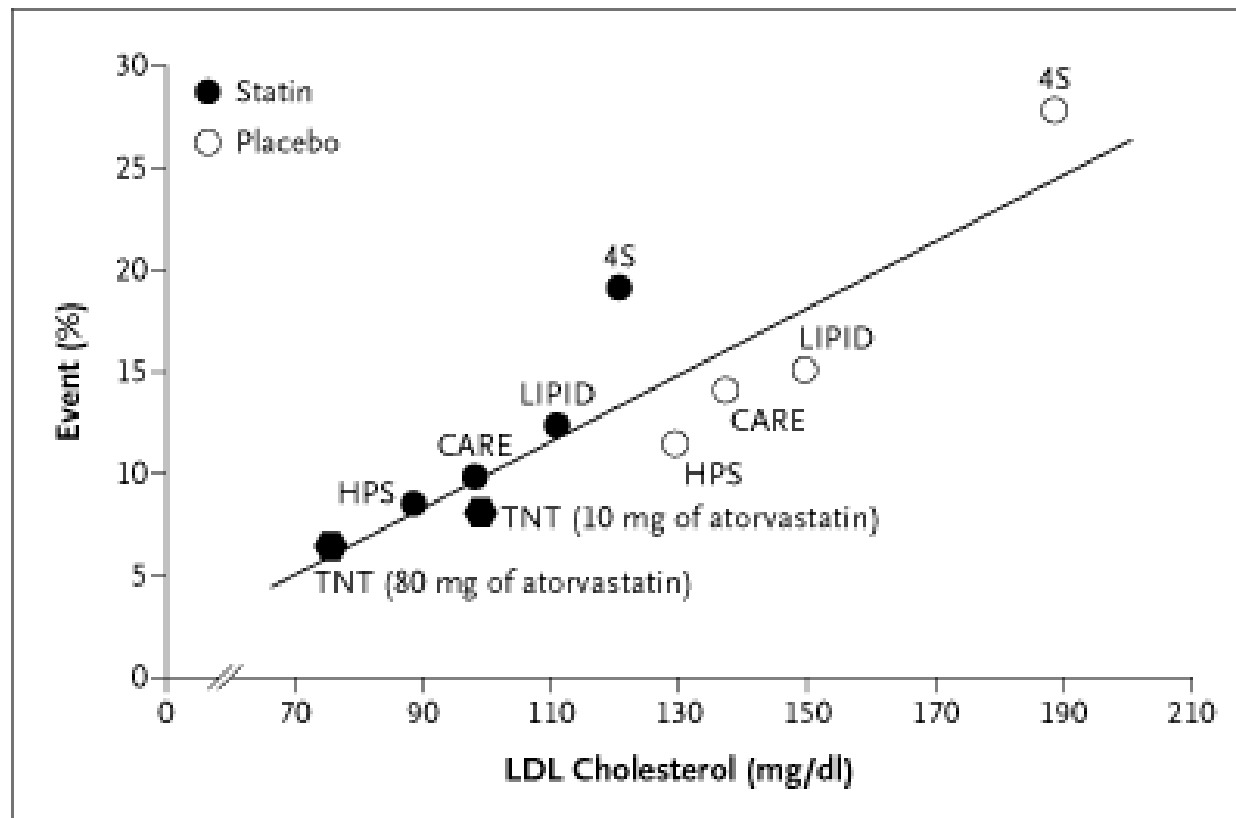
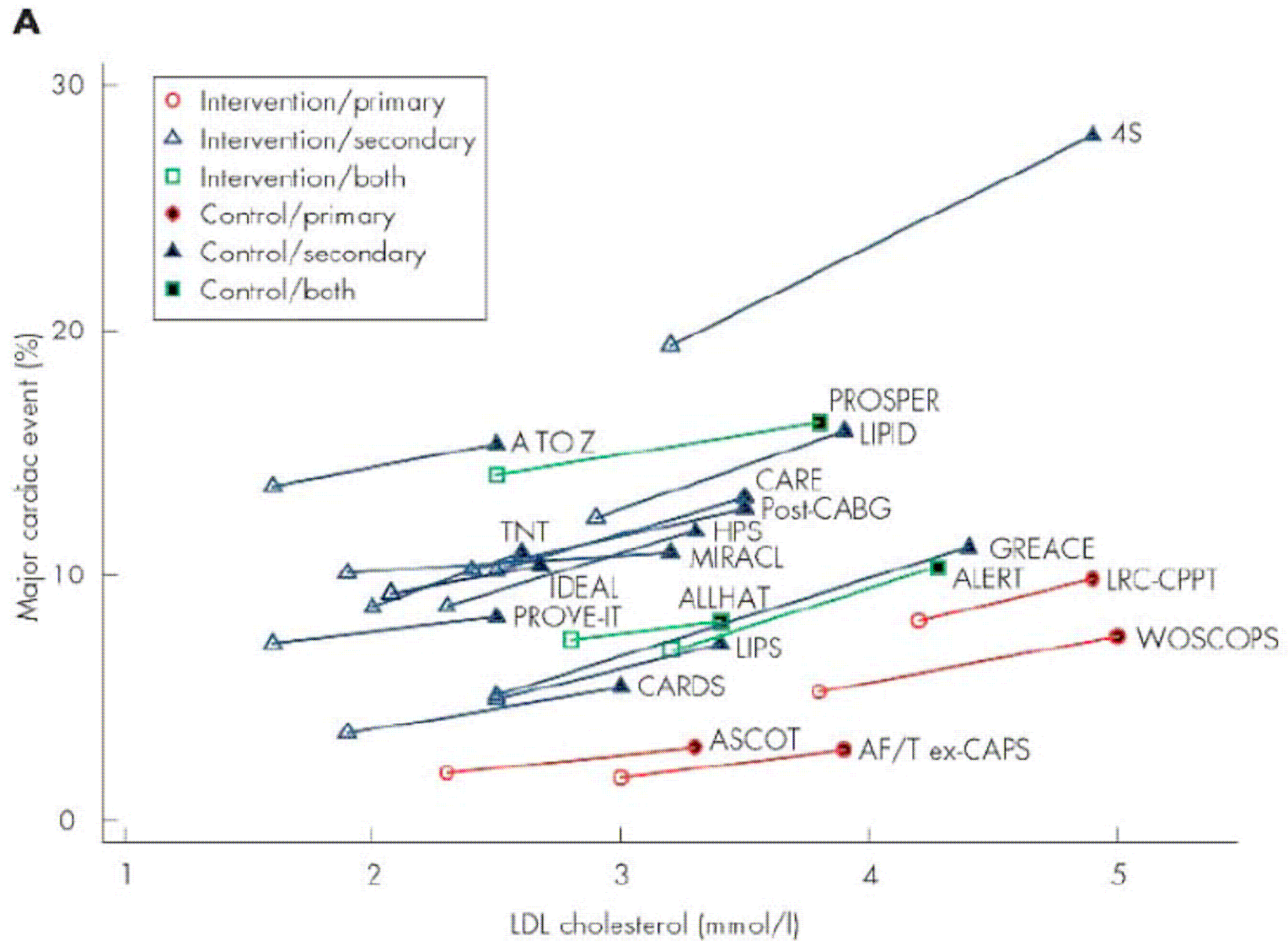


Figure 1 Statin trials showing % reduction in major cardiac events and LDL cholesterol (mmol/l)



Efecto del LDL basal y su reducción en el RR de eventos en el HPS

UpToDate®   intensity of lipid lowering ▼ Todos los temas  Languages | Acerca de nosotros | Contacto |

Nueva búsqueda | Información para el paciente | Novedades | Calculadoras ► Iniciar

 Volver a los resultados de búsqueda

Intensity of lipid lowering therapy in secondary prevention of cardiovascular disease Find Pt Patient Print ✉

▶ If this is the case, then some portion of benefits from statins may be determined by the specific type of statin used or by the dose of statin, independent of the effects on LDL-C. Future studies that achieve the same LDL-C goals with multiple medications may help solve this puzzle.

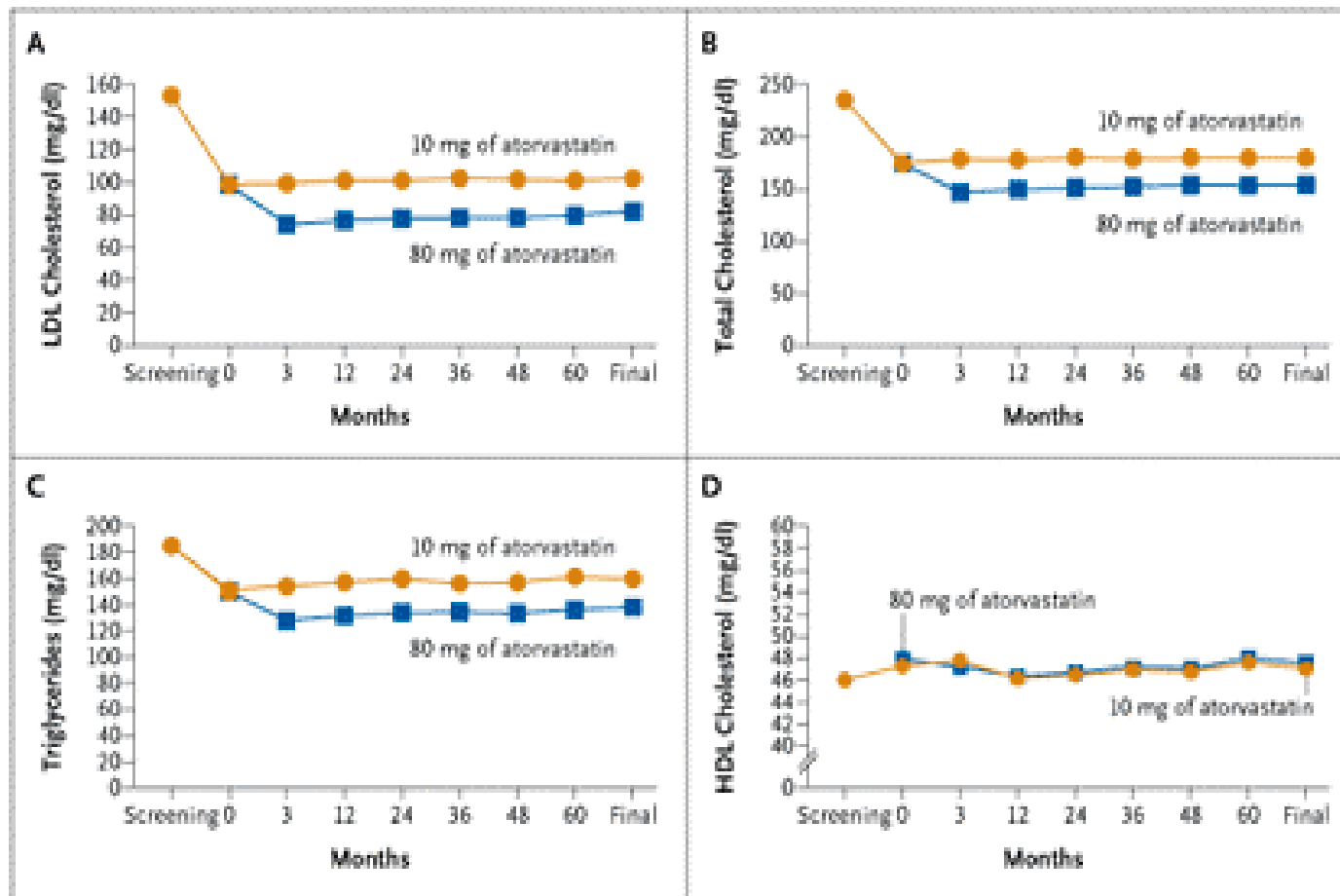
Statin dose versus goal LDL — The idea of targeting statin dosing to achieve a specific goal LDL-C is central to many major lipid guidelines. However, LDL-C reduction was a post-randomization intermediate outcome in these studies and, therefore, its correlation with other study endpoints represents an observational finding. None of the analyses to date adequately control for all major confounders, especially adherence to statin therapy, and non-randomized trials cannot control for unknown and unmeasured confounders. In the absence of clinical trials that specifically target a goal LDL-C, the evidence for goal LDL-C is based on relatively low quality observational data of achieved LDL, even though these observations were made in the context of randomized trials. This remains the case even when large-scale meta-analyses are performed that model the association between reductions in LDL-C and reductions in cardiovascular events [15].

In the Heart Protection Study (HPS), there was a four to six week prerandomization run-in period in which all patients received simvastatin 40 mg daily and the LDL response was measured [6]. This allowed a valid subgroup analysis based upon prerandomization achieved LDL. The reduction in the primary outcome (first major cardiovascular event) was similar for patients with a smaller (<38 percent), average, or larger (>48 percent) change in LDL-C during the run-in period, which does not support the contention that the benefit with simvastatin is related to the achieved LDL-C.

In addition, LDL measurement in clinical practice has a number of problems including measurement error, short-term and long-term variability in LDL, and the potentially greater importance of LDL subparticles than total LDL.

No study has directly assessed the benefits of a strategy of increasing the statin dose to achieve a specific recommended LDL-C level (or percentage reduction in LDL-C) or the safety or efficacy of multidrug therapy in pursuit of proposed LDL-C goals.

Perfiles lipídicos en TNT



Perfiles lipídicos en TNT

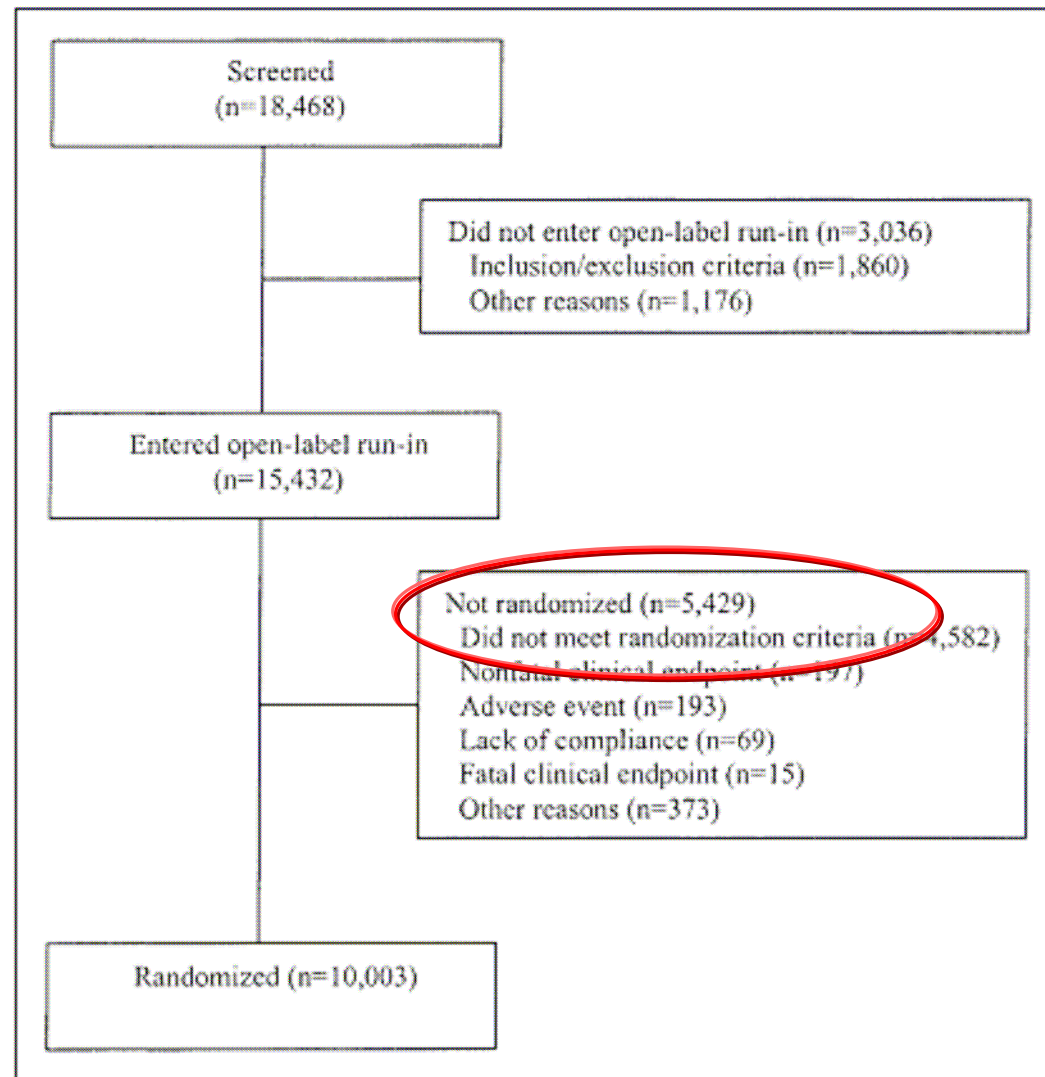
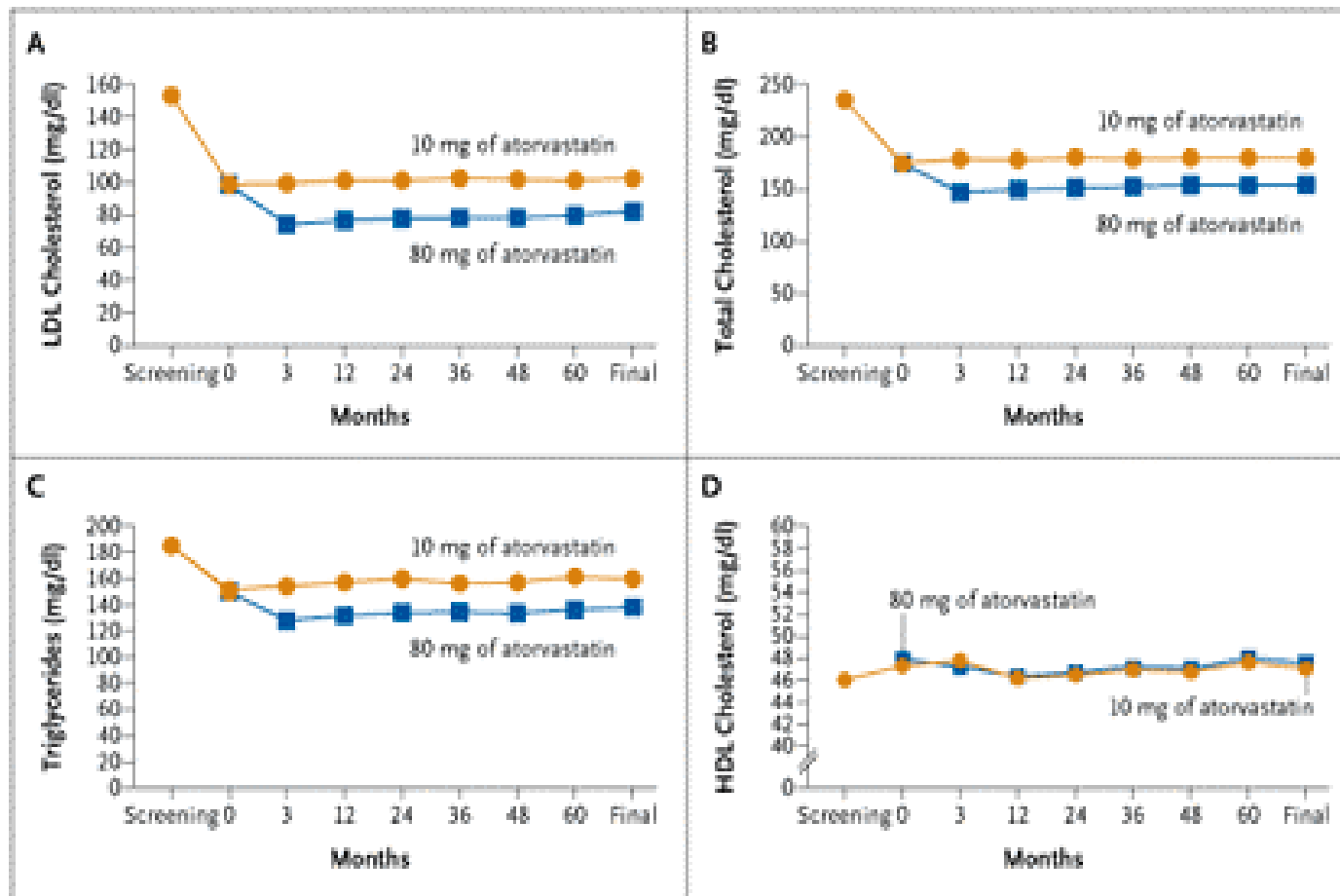


FIGURE 1. Patient disposition.

Perfiles lipídicos en TNT



9. En cuanto al tratamiento con altas dosis de estatinas,

Consider increasing dose to 80 mg simvastatin or drug of similar efficacy and cost if the total cholesterol does not fall below 4 mmol/litre or LDL cholesterol less than 2 mmol/litre

ISSUE: FDA notified healthcare professionals that it is recommending limiting the use of the highest approved dose of the cholesterol-lowering medication simvastatin (80 mg) because of increased risk of muscle damage

RECOMMENDATION: Simvastatin 80 mg should not be started in new patients, including patients already taking lower doses of the drug.

Use to achieve total cholesterol less than 4 mmol/litre or LDL cholesterol less than 2 mmol/litre

Safety of Anacetrapib in Patients with or at High Risk for Coronary Heart Disease

METHODS

We conducted a randomized, double-blind, placebo-controlled trial to assess the efficacy and safety profile of anacetrapib in patients with coronary heart disease or at high risk for coronary heart disease. Eligible patients who were taking a statin and who had an LDL cholesterol level that was consistent with that recommended in guidelines were assigned to receive 100 mg of anacetrapib or placebo daily for 18 months. The primary end points were the percent change from baseline in LDL cholesterol at 24 weeks (HDL cholesterol level was a secondary end point) and the safety

RESULTS

A total of 1623 patients underwent randomization. By 24 weeks, the LDL cholesterol level had been reduced from 81 mg per deciliter (2.1 mmol per liter) to 45 mg per deciliter (1.2 mmol per liter) in the anacetrapib group, as compared with a reduction from 82 mg per deciliter (2.1 mmol per liter) to 77 mg per deciliter (2.0 mmol per liter) in the placebo group ($P < 0.001$) — a 39.8% reduction with anacetrapib beyond that seen with placebo. In addition, the HDL cholesterol level increased from 41 mg

Estudio ILLUMINATE

	Cambios de HDL inicial al 3 mes/año (mg/dL)	Cambios de LDL inicial al 3 mes/año (mg/dL)		
Atorvastatina hasta LDL < 100	+ 0.5 +0.5	+0.6 +0.9		
Igual + Torcetrapib 60mg	+29 +34 (+72.1%)	-20.5 -21.5 (-24.9%)		

Barter et al, NEJM 357,2109-2122 (22 de noviembre de 2007)

CONCLUSIONS

Treatment with anacetrapib had robust effects on LDL and HDL cholesterol, had an acceptable side-effect profile, and, within the limits of the power of this study, did not result in the adverse cardiovascular effects observed with torcetrapib. (Funded by Merck Research Laboratories; ClinicalTrials.gov number, NCT00685776.)

	Cambios de HDL inicial al 3 mes/año (mg/dL)	Cambios de LDL inicial al 3 mes/año (mg/dL)	Eventos cardiovasculares a los 550 días	Muerte por cualquier causa
Atorvastatina hasta LDL < 100	+ 0.5 +0.5	+0.6 +0.9	373 (5%)	59/7534 0.8%
Igual + Torcetrapib 60mg	+29 +34 (+72.1%)	-20.5 -21.5 (-24.9%)	464 (6.2%) HR=1.25 P<0.001	93/7533 1.2% p<=0.006

Barter et al, NEJM 357,2109-2122 (nov07)

Investigación clínica: dos grandes tipos de variables

❑ Variables subrogadas

subclínicas

intermedias



orientadas a la
enfermedad
(*"disease-oriented"*)

❑ VARIABLES CLÍNICAS FINALES

ORIENTADAS AL
PACIENTE
(*"patient-oriented"*)



Effect of Lower Targets for Blood Pressure and LDL Cholesterol on Atherosclerosis in Diabetes

The SANDS Randomized Trial

Objective To compare progression of subclinical atherosclerosis in adults with type 2 diabetes treated to reach aggressive targets of low-density lipoprotein cholesterol (LDL-C) of 70 mg/dL or lower and systolic blood pressure (SBP) of 115 mm Hg or lower vs standard targets of LDL-C of 100 mg/dL or lower and SBP of 130 mm Hg or lower.

Main Outcome Measures Primary end point was progression of atherosclerosis measured by common carotid artery intimal medial thickness (IMT). Secondary end points were other carotid and cardiac ultrasonographic measures and clinical events.

IECAS/ARA2 , +HCT , +ACA , +BB , +AB ...

ESTATINA , +EZETIMIBA , +OMEGA3 , +FENOFIBRATO ...

Estudio SANDS

JAMA, April 9, 2008—Vol 299, No. 14

de qué estamos pendientes...

- ▶ EZE...
 - ▶ IMPROVE-IT (2013)
 - ▶ SHARP
- ▶ NIA...
 - ▶ AIM-HIGH (2011)
 - ▶ HPS2-THRIVE (2013)

O'Riordan M. ARBITER 6-HALTS: Final results from complete study population published. The Heart 2010 abril 14, en: www.theheart.org

-
- ***Tras la finalización de la revisión de los resultados disponibles del estudio HPS2-THRIVE, se ha concluido que actualmente el balance beneficio-riesgo de Tredaptive® es desfavorable. En consecuencia se ha decidido suspender la autorización de comercialización de este medicamento.***
 - ***A partir del próximo 26 de enero, Tredaptive® dejará de estar disponible.***

Como continuación de la [nota informativa MUH \(FV\), 18/2012](#), la Agencia Española de Medicamentos y Productos Sanitarios (AEMPS) informa a los profesionales sanitarios sobre la suspensión de comercialización de Tredaptive® (ácido nicotínico+laropiprant), medicamento hipolipemiante autorizado en Europa en julio de 2008.

La AEMPS informó el pasado 21 de diciembre sobre el inicio de la revisión del balance beneficio-riesgo de Tredaptive® después de conocerse los resultados preliminares del ensayo clínico HPS2-THRIVE, en el que se comparó la eficacia de Tredaptive® asociado a una estatina respecto al uso de una estatina sola. Estos resultados indicaban que la mencionada asociación no era más eficaz que el uso de una estatina sola en la prevención de acontecimientos cardiovasculares mayores, observándose además un aumento de la frecuencia de algunas reacciones adversas graves en el grupo tratado con Tredaptive®.

LDL-Lowering Does Not Halt Progression of CKD: SHARP - Windows Internet Explorer

http://www.medscape.com/viewarticle/824441

Favoritos

LDL-Lowering with Vytorin Does Not Halt the Progression of CKD: SHARP

Heartwire

Michael O'Riordan

May 01, 2014

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SHARP: Cholesterol-Lowering Combo in Renal Disease

SHARP Refocuses Primary End Point

FDA looking into Vytorin

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OXFORD, UK – For patients with chronic kidney disease (CKD), lowering LDL cholesterol with a combination of **simvastatin** and **ezetimibe** (Vytorin, Merck) failed to halt the progression of kidney disease to end-stage renal disease (ESRD)^[1]. Treatment with the simvastatin/ezetimibe combination also failed to have an impact of other clinical end points, including ESRD or death from any cause and ESRD or the doubling of baseline creatinine levels.

These are the long-term findings from the **Study of Heart and Renal Protection** (SHARP), which included 6245 participants with CKD not on dialysis at the time of randomization. As reported previously by **heartwire**, the SHARP investigators did show that cholesterol-lowering with simvastatin/ezetimibe reduced the relative risk of major atherosclerotic events by 17% and major vascular events by 15.3%.

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26/06/2014

- The combination of a cholesteryl ester transfer protein inhibitor (which raises HDL-C and lowers LDL-C) with [atorvastatin](#) resulted in increased mortality compared with atorvastatin alone [31]. (See "[HDL metabolism and approach to the patient with abnormal HDL-cholesterol levels](#)", section on 'CETP inhibition'.)
- • No adequate clinical endpoint data are available for [ezetimibe](#), which inhibits cholesterol absorption. A trial that compared [simvastatin](#) alone with a combination of simvastatin and [ezetimibe](#) found no evidence of additional benefit with the combination on the surrogate outcome of change in carotid intima-media thickness [32]. Another trial of combination therapy found that patients treated with niacin plus a statin had fewer cardiovascular endpoints than those treated with ezetimibe plus a statin [33], and another trial found that adding niacin to a statin did not improve outcomes [34]. This raises a concern that one possible explanation for the results from these latter two trials could be that adding [ezetimibe](#) to a statin might actually worsen outcomes; additional trials are underway that should clarify this issue. (See "[Lipid lowering with drugs other than statins and fibrates](#)", section on 'Ezetimibe'.)

Extended-Release Niacin or Ezetimibe and Carotid Intima-Media Thickness

NOVEMBER 26, 2009

CONCLUSIONS

This comparative-effectiveness trial shows that the use of extended-release niacin causes a significant regression of carotid intima-media thickness when combined with a statin and that niacin is superior to ezetimibe. (ClinicalTrials.gov number, NCT00397657.)

Si niacina + estatina es mejor que ezetimibe + estatina

Si niacina + estatina es igual que estatina sola

Estatina + ezetimibe.....igual o peor que

Effect of Lower Targets for Blood Pressure and LDL Cholesterol on Atherosclerosis in Diabetes

The SANDS Randomized Trial

Conclusions Reducing LDL-C and SBP to lower targets resulted in regression of carotid IMT and greater decrease in left ventricular mass in individuals with type 2 diabetes. Clinical events were lower than expected and did not differ significantly between groups. Further follow-up is needed to determine whether these improvements will result in lower long-term CVD event rates and costs and favorable risk-benefit outcomes.

Table 3. Cardiovascular Disease Events

	Aggressive (n = 252)	Standard (n = 247)	P Value ^a
	No. (Rate per 100 person-years) [95% Confidence Interval]		
Cardiovascular disease events			
Primary	11 (1.5) [0.6 to 2.3] ^b	8 (1.1) [0.3 to 1.9] ^c	.51
Other	1 (0.1) [−0.1 to 0.4] ^d	3 (0.4) [−0.1 to 0.9] ^e	.31
Total	12 (1.6) [0.7 to 2.5]	11 (1.5) [0.6 to 2.3]	.87
Non-cardiovascular disease deaths	2 (0.3) [−0.1 to 0.6]	4 (0.5) [0 to 1.0]	.40

PLEIOTROPICOS

EFFECTOS NO RELACIONADOS CON LA ACCION HIPOLIPEMIANTE

- Mejora la fx endotelial(2-6 semanas)
- Inhibicion activacion plaquetaria(4 semanas)
- Reducción adhesividad de los monocitos(6 sem)
- Reducción PCR (6-8 semanas)
- Limitación de la formación plaquetaria (10 sem)

Nateglinida en comparación con placebo no redujo significativamente la incidencia acumulada de diabetes (36% y 34%, respectivamente; hazard ratio, 1.07; 95% IC, 1.00 a 1.15; $p=0.05$), el primer endpoint cardiovascular combinado (7.9% y 8.3%, respectivamente; hazard ratio, 0.94, 95% IC, 0.82 a 1.09; $p=0.43$) ni el segundo endpoint cardiovascular combinado (14.2% y 15.2%, respectivamente; hazard ratio, 0.93, 95% IC, 0.83 a 1.03; $p=0.16$). Nateglinida, sin embargo, incrementó el riesgo de hipoglucemia NEJM Mar 10

Algunas consideraciones

- ❑ Algunas guías fijan niveles umbral para inicio y fin de tratamiento
- ❑ Casi todos los ensayos usan dosis fijas de estatinas
- ❑ Los eventos se comunican por rama de estudio y no por niveles de LDL alcanzados
- ❑ La mitad de los pacientes tratados con terapia intensiva NO alcanzaron niveles de LDL < 80mg/dL
- ❑ Casi Ningún ensayo ha probado terapias combinadas (y los que hay.....NEGATIVOS)
- ❑ Se excluían casi la mitad de los pacientes seleccionados por comorbilidades (edad, IR, fallo hepático, ingesta de alcohol, con run-in period...)

-
- ❑ Y ahora un poco del indicador
 - ❑ ¿Porqué (creo yo) se puso atorva de 80mg sí y de 40mg no?
 - ❑ Supongo que por eficiencia
 - Baja diferencia de efectividad
 - Alta diferencia de coste (sobretudo antes)

IDEAL Study

Table 3. Incidence of and Hazard Ratios for Primary and Secondary Efficacy Outcomes

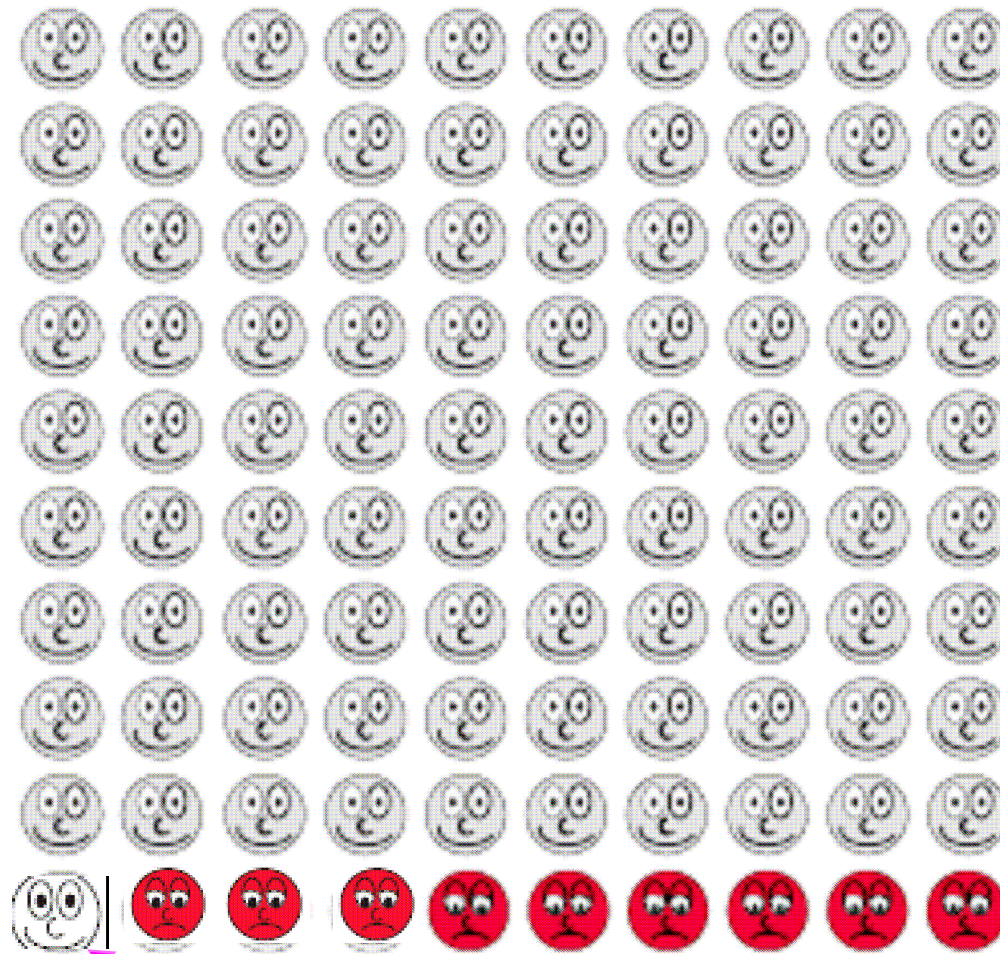
Outcome Measures	Simvastatin, No. (%) (n = 4449)	Atorvastatin, No. (%) (n = 4439)	Hazard Ratio (95% CI)	P Value
Major coronary event (primary outcome)	463 (10.4)	411 (9.3)	0.89 (0.78-1.01)	.07
CHD death	178 (4.0)	175 (3.9)	0.99 (0.80-1.22)	.90
Nonfatal myocardial infarction	321 (7.2)	267 (6.0)	0.83 (0.71-0.98)	.02
Cardiac arrest with resuscitation	7 (0.2)	10 (0.2)		
Any CHD event	1059 (23.8)	898 (20.2)	0.84 (0.76-0.91)	<.001
Coronary revascularization	743 (16.7)	579 (13.0)	0.77 (0.69-0.86)	<.001
Hospitalization for unstable angina	235 (5.3)	196 (4.4)	0.83 (0.69-1.01)	.06
Fatal or nonfatal stroke	174 (3.9)	151 (3.4)	0.87 (0.70-1.08)	.20
Major cardiovascular event*	608 (13.7)	533 (12.0)	0.87 (0.78-0.98)	.02
Hospitalization for nonfatal CHF	123 (2.8)	99 (2.2)	0.81 (0.62-1.05)	.11
Peripheral arterial disease†	167 (3.8)	127 (2.9)	0.76 (0.61-0.96)	.02
Any cardiovascular event	1370 (30.8)	1176 (26.5)	0.84 (0.78-0.91)	<.001
All-cause mortality	374 (8.4)	366 (8.2)	0.98 (0.85-1.13)	.81
Cardiovascular	218 (4.9)	223 (5.0)	1.03 (0.85-1.24)	.78
Noncardiovascular	156 (3.5)	143 (3.2)	0.92 (0.73-1.15)	.47
Malignant disease	112 (2.5)	99 (2.2)	0.89 (0.68-1.16)	.38
Suicide/violence/accidental death	9 (0.2)	5 (0.1)	...	...
Other	30 (0.7)	32 (0.7)	...	...
Unclassified	5 (0.1)	7 (0.2)	...	...

Abbreviations: CHD, coronary heart disease; CHF, congestive heart failure; CI, confidence interval. Ellipses indicate analysis not done because of too few events.

*Major coronary events and stroke.

†Any newly diagnosed peripheral arterial disease or that which has led to hospitalization.

Expresado en forma absoluta :RRA y NNT



Libre de eventos



Mejora con atorvastatina



Experimenta evento

Ensayo CAPRIE

Methods CAPRIE was a randomised, blinded, international trial designed to assess the relative efficacy of clopidogrel (75 mg once daily) and aspirin (325 mg once daily) in reducing the risk of a composite outcome cluster of ischaemic stroke, myocardial infarction, or vascular death;

Findings 19 185 patients, with more than 6300 in each of the clinical subgroups, were recruited over 3 years, with a mean follow-up of 1·91 years. There were 1960 first events included in the outcome cluster on which an intention-to-treat analysis showed that patients treated with clopidogrel had an annual 5·32% risk of ischaemic stroke, myocardial infarction, or vascular death compared with 5·83% with aspirin. These rates reflect a statistically significant ($p=0\cdot043$) relative-risk reduction of 8·7% in favour of clopidogrel (95% CI 0·3–16·5). Corresponding on-treatment

We highlight these alternative strategies below after each recommendation.

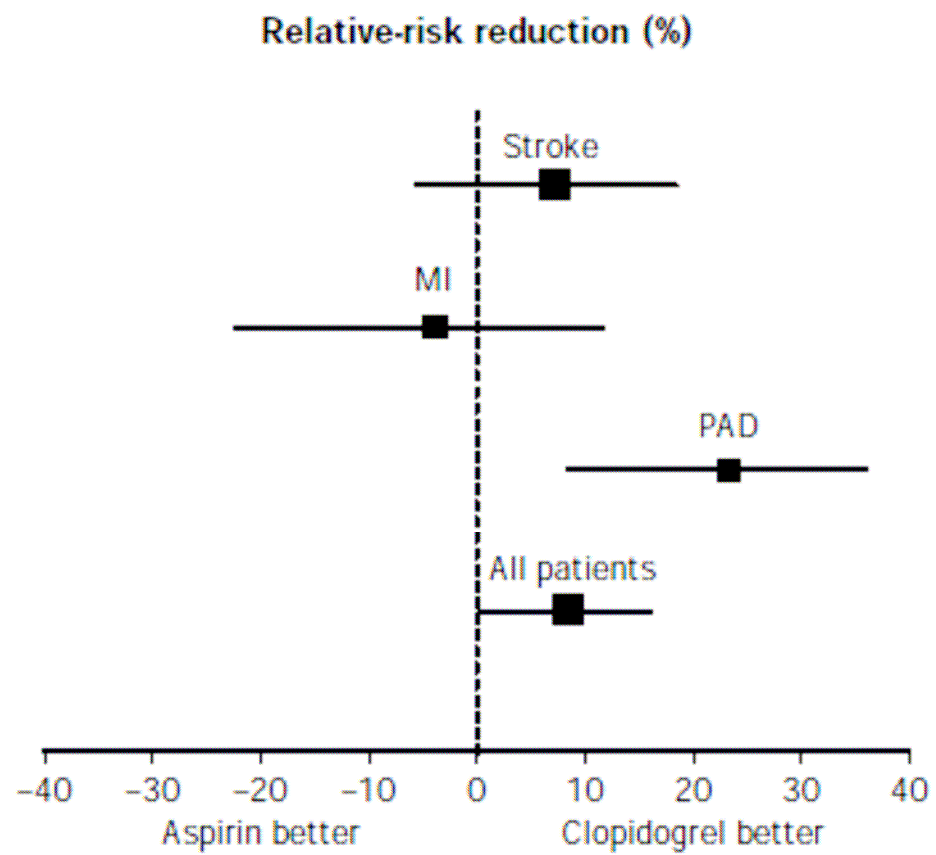
Background

- Statin therapy reduces cardiovascular events in both primary and secondary prevention, and also appears to reduce all-cause mortality in most groups studied. (See "Clinical trials of cholesterol lowering for primary prevention of coronary heart disease" and "Clinical trials of cholesterol lowering in patients with cardiovascular disease or diabetes".)
- Compared with less intensive statin therapy, more intensive statin therapy in patients with stable CHD results in small reductions in cardiovascular events, but appears to have no effect on all-cause mortality. Higher doses of statins may be more likely to produce side effects. In addition, high-dose brand name statins may not be worth the added expense to some patients, when compared with slightly less effective generic statins. (See 'Intensive therapy with statins' above.)
- Lowering LDL-C with medications other than statins has generally not been proven to reduce overall mortality in either primary or secondary prevention. (See 'Use of medications other than statins' above.)

Acute coronary syndrome

- We recommend that patients with an acute coronary syndrome be treated with intensive statin therapy with [atorvastatin](#) 80 mg daily (**Grade 1B**). (See "[Low density lipoprotein-cholesterol \(LDL-C\) lowering after an acute](#)

EL NUEVO BORRADOR DEL NICE ESTABLECE COMO AUDITORÍA NO EL NIVEL DE LDL SINO EL % DE PERSONAS CON ESTATINA



¿Cuánto reducen (%) el LDL-c las distintas estatinas ?

	5 mg	10 mg	20 mg	40 mg	80 mg
Atorvastatina	31	37	43	49	55
Simvastatina	23	27	32	37	42
Pravastatina	15	20	24	29	33
Lovastatina	-	21	29	37	45
Fluvastatina	10	15	21	27	33

164 ECAS breves

48

Población atendida y estudiada:
No es lo mismo...

☐ **Eficacia**

☐ **Efectividad**

¿Son los pacientes del estudio
representativos de nuestra población?
Criterios Inclusión y exclusión

Características basales de los pacientes



¿Son mejores unas estatinas que otras?

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 Volver a los resultados de búsqueda

Intensity of lipid lowering therapy in secondary prevention of cardiovascular disease Find Patient Print Email

Intensity of lipid lowering therapy in secondary prevention of cardiovascular disease

Authors David M Rind, MD Rodney A Hayward, MD	Section Editor Mason W Freeman, MD	Deputy Editor H Nancy Sokol, MD
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INTENSIVE THERAPY WITH STATINS – Some guidelines, including both LDL goal-directed guidelines and statin dose-based guidelines, have recommended aggressive lipid-lowering therapy (either to an LDL-C goal below 70 mg/dL [1.8 mmol/L] or with high-intensity statin therapy) in some or all patients treated for secondary prevention [1,2].

Some of the trials used to support more aggressive lipid-lowering recommendations have not shown consistent benefits across outcomes, either finding no reductions in all-cause mortality and cardiovascular mortality or only finding reductions in cardiovascular mortality. Even these latter findings are somewhat surprising, since cardiovascular mortality is a major component of total mortality in the populations studied.

A 2011 meta-analysis of randomized trials comparing intensive with moderate statin therapy that included patients with both stable CHD and acute coronary syndrome (ACS) found that intensive therapy did not result in a statistically significant reduction in all-cause mortality (relative risk [RR] 0.92, 95% CI 0.83-1.03) or cardiovascular mortality (RR 0.89, CI 0.78-1.01), however there was moderate heterogeneity of results across the included trials [3]. In the subgroup of trials of patients with ACS, intensive therapy reduced mortality (RR 0.75, CI 0.61-0.91) and cardiovascular mortality (RR 0.74, CI 0.59-0.94) and there was no heterogeneity. In the subgroup of trials of patients with stable CHD, intensive therapy did not reduce all-cause mortality (RR 0.95, CI 0.85-1.06) or cardiovascular mortality (RR 0.97, CI 0.87-1.03), although there was some remaining heterogeneity across trials [4].

Some of the largest of these trials are discussed in more depth below as the details of these trials are important in understanding why there is disagreement about whether targeting lower LDL-C goals or using more intensive statin regimens is beneficial.

Among the available choices for intensive statin therapy, the two most potent regimens are atorvastatin 80 mg daily and rosuvastatin 40 mg daily. In the SATURN trial, in 1039 patients with known coronary disease, these two regimens had similar effects on the surrogate primary outcome of percent atheroma volume and also had similar clinical outcomes and rates of adverse events [5]. (See "Clinical trials of cholesterol lowering in patients with cardiovascular disease or diabetes", section on 'SATURN trial'.)

ORIGINAL ARTICLE

Effect of Two Intensive Statin Regimens on Progression of Coronary Disease

Stephen J. Nicholls, M.B., B.S., Ph.D., Christie M. Ballantyne, M.D., Philip J. Barter, M.B., B.S., Ph.D., M. John Chapman, Ph.D., D.Sc., Raimund M. Erbel, M.D., Peter Libby, M.D., Joel S. Raichlen, M.D., Kiyoko Uno, M.D., Marilyn Borgman, R.N., Kathy Wolski, M.P.H., and Steven E. Nissen, M.D.

BACKGROUND

Statins reduce adverse cardiovascular outcomes and slow the progression of coronary atherosclerosis in proportion to their ability to reduce low-density lipoprotein (LDL) cholesterol. However, few studies have either assessed the ability of intensive statin treatments to achieve disease regression or compared alternative approaches to maximal statin administration.

METHODS

We performed serial intravascular ultrasonography in 1039 patients with coronary disease, at baseline and after 104 weeks of treatment with either atorvastatin, 80 mg daily, or rosuvastatin, 40 mg daily, to compare the effect of these two intensive statin regimens on the progression of coronary atherosclerosis, as well as to assess their safety and side-effect profiles.

RESULTS

After 104 weeks of therapy, the rosuvastatin group had lower levels of LDL cholesterol than the atorvastatin group (62.6 vs. 70.2 mg per deciliter [1.62 vs. 1.82 mmol per liter], $P<0.001$), and higher levels of high-density lipoprotein (HDL) cholesterol (50.4 vs. 48.6 mg per deciliter [1.30 vs. 1.26 mmol per liter], $P=0.01$). The primary efficacy end point, percent atheroma volume (PAV), decreased by 0.99% (95% confidence interval [CI], -1.19 to -0.63) with atorvastatin and by 1.22% (95% CI, -1.52 to -0.90) with rosuvastatin ($P=0.17$). The effect on the secondary efficacy end point, normalized total atheroma volume (TAV), was more favorable with rosuvastatin than with atorvastatin: -6.39 mm³ (95% CI, -7.52 to -5.12), as compared with -4.42 mm³ (95% CI, -5.98 to -3.26) ($P=0.01$). Both agents induced regression in the majority of patients: 63.2% with atorvastatin and 68.5% with rosuvastatin for PAV ($P=0.07$) and 64.7% and 71.3%, respectively, for TAV ($P=0.02$). Both agents had acceptable side-effect profiles, with a low incidence of laboratory abnormalities and cardiovascular events.

CONCLUSIONS

Maximal doses of rosuvastatin and atorvastatin resulted in significant regression of coronary atherosclerosis. Despite the lower level of LDL cholesterol and the higher level of HDL cholesterol achieved with rosuvastatin, a similar degree of regression of PAV was observed in the two treatment groups. (Funded by AstraZeneca Pharmaceuticals; ClinicalTrials.gov number, NCT000620542.)



Table 3. Primary and Secondary End Points, as Evaluated on Intravascular Ultrasonography.*

End Point	Atorvastatin (N = 519)	Rosuvastatin (N = 520)	P Value
At baseline			
PAV — %			
Mean	36.0±8.3	36.7±8.2	0.33
Median (95% CI)	36.2 (30.6 to 41.4)	36.2 (31.4 to 42.0)	
TAV — mm ³			
Mean	144.2±63.8	144.1±60.8	0.99
Median (95% CI)	136.6 (95.8 to 182.9)	133.4 (95.9 to 180.1)	
At 104 weeks			
PAV — %			
Mean	34.9±8.1	35.4±8.2	0.64
Median (95% CI)	34.9 (29.6 to 40.3)	34.8 (29.5 to 40.2)	
TAV — mm ³			
Mean	138.5±63.2	135.7±57.7	0.67
Median (95% CI)	127.6 (91.0 to 176.1)	124.9 (93.4 to 167.7)	
Median change from baseline			
PAV — % (95% CI)	−0.99 (−1.19 to −0.63)	−1.22 (−1.52 to −0.90)	0.17†
TAV — mm ³ (95% CI)	−4.42 (−5.98 to −3.26)	−6.39 (−7.52 to −5.12)	0.01†
Disease regression — % of patients			
Based on change in PAV	63.2	68.5	0.07
Based on change in TAV	64.7	71.3	0.02

* Plus-minus values are means ±SD. CI denotes confidence interval, PAV percent atheroma volume, and TAV total atheroma volume.

† The P value for the between-group comparison of the change from baseline was calculated with the use of analysis of covariance, with the rate of change in PAV or in TAV as the independent variable and the rank of the corresponding baseline value as a covariate and treatment group as a factor.

CONCLUSIONS

Maximal doses of rosuvastatin and atorvastatin resulted in significant regression of coronary atherosclerosis. Despite the lower level of LDL cholesterol and the higher level of HDL cholesterol achieved with rosuvastatin, a similar degree of regression of PAV was observed in the two treatment groups. (Funded by AstraZeneca Pharmaceuticals; ClinicalTrials.gov number, NCT000620542.)

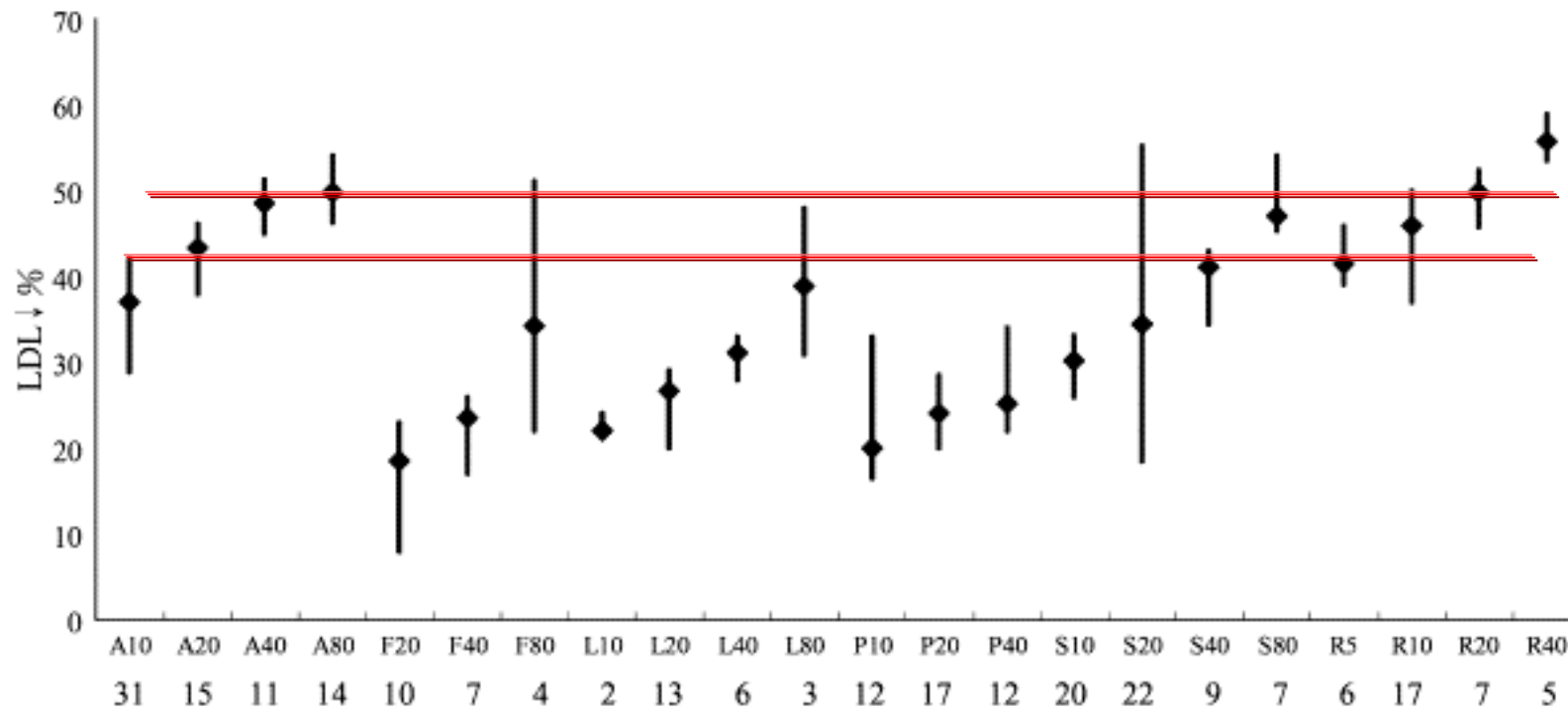
¿Qué hubiera pasado si?

- ☐ En vez de prescribir atorva de 10 y/o de 20 hubiéramos prescrito simvastatina de 20/40mg
- ☐ En vez de rosu/pitavastatina hubiéramos prescrito atorva
- ☐ En vez de bajar dosis de estatina y asociar ezetimibe por “precaución”, hubiéramos o mantenido o bajado levemente la dosis de estatina

REVIEW ARTICLE

A systematic review and meta-analysis on the therapeutic equivalence of statins

T.-C. Weng* MSc (Clin Pharm), Y.-H. Kao Yang* BSP Pharm, S.-J. Lin† PhD and S.-H. Tai‡ MSc (Clin Pharm)



Tabla

Reducción porcentual del cLDL requerida para alcanzar los objetivos como función del valor basal

cLDL basal		Reducción hasta cLDL objetivo (%)		
mmol/l	~mg/dl	< 1,8 mmol/l (~70 mg/dl)	< 2,5 mmol/l (~100 mg/dl)	< 3 mmol/l (~115 mg/dl)
> 6,2	> 240	> 70	> 60	> 55
5,2-6,2	200-240	65-70	50-60	40-55
4,4-5,2	170-200	60-65	40-50	30-45
3,9-4,4	150-170	55-60	35-40	25-30
3,4-3,9	130-150	45-55	25-35	10-25
2,9-3,4	110-130	35-45	10-25	< 10
2,3-2,9	90-110	22-35	< 10	—
1,8-2,3	70-90	< 22	—	—

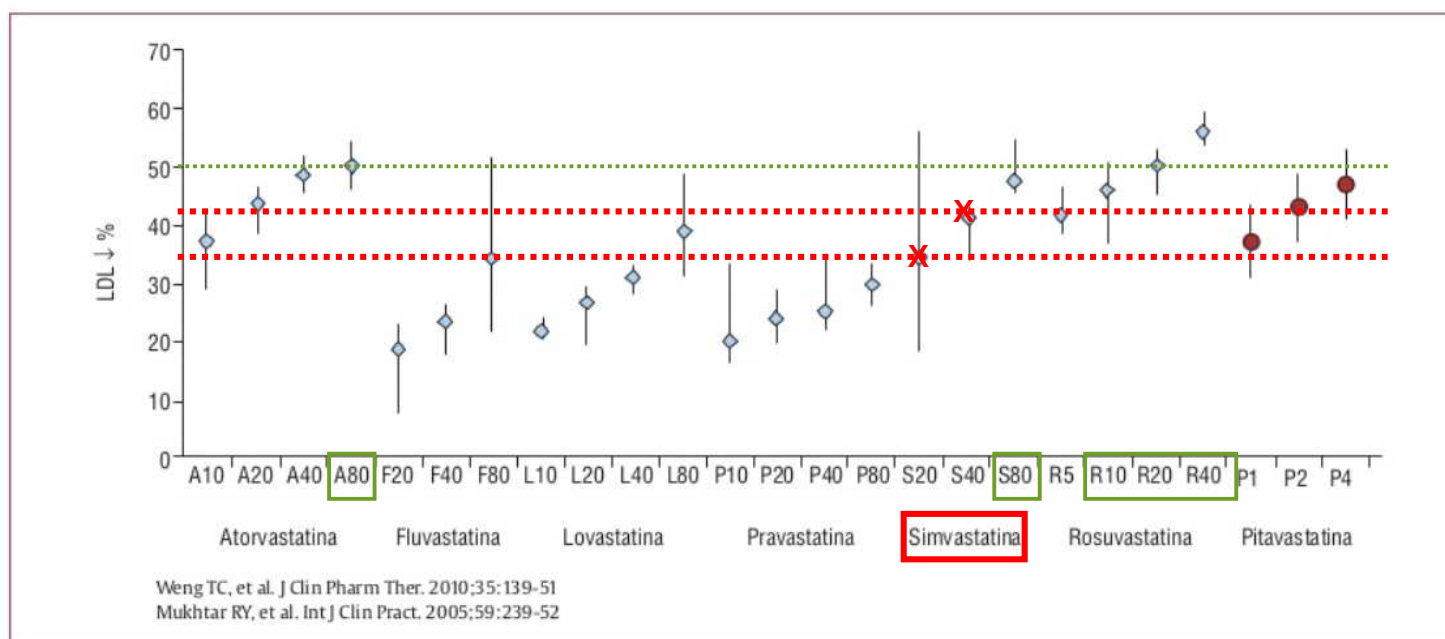


Figura. Revisión sistemática y metaanálisis sobre la equivalencia terapéutica de las estatinas.

¿Dosis de estatina u objetivo de cLDL?

La idea de adecuar la dosis de estatinas para obtener un valor específico de cLDL es central en la mayoría de las guías de lípidos. No obstante la disminución del cLDL fue una variable de resultado orientada a la enfermedad considerada tras la aleatorización y, por tanto, su correlación con otras variables de los estudios es puramente observacional. Ninguno de los análisis realizados hasta la fecha incluye un control adecuado de los sesgos principales, especialmente la adherencia al tratamiento con estatinas. Y los estudios que no incluyen aleatorización no pueden controlar sesgos desconocidos o no medidos. En ausencia de ensayos clínicos que especifiquen una determinada cifra objetivo de cLDL la evidencia para su empleo se basa en datos observacionales de una relativa baja calidad, incluso si dichas observaciones se realizaron en el contexto de un ensayo clínico aleatorizado. Esto es también así en los meta-análisis que relacionan los niveles de cLDL con los episodios cardiovasculares.

Una de las piedras angulares desde el punto de vista evidencial, en la que se basa la estrategia de cifras objetivo del cLDL es el meta-análisis del Cholesterol Treatment Trialists' Collaboration cuya última actualización se publicó en The Lancet en 2010. Dicho estudio incluyó 26 ensayos clínicos aleatorizados, tuvo como objetivo evaluar la seguridad y eficacia del tratamiento intensivo con estatinas para disminuir el cLDL y sus principales conclusiones son las siguientes: una reducción adicional del cLDL produce una reducción adicional de la incidencia de ataques al corazón, revascularización y ACV isquémicos, de forma segura. Por cada 1,0 mmol/L de reducción se consigue una disminución de la tasa anual de episodios vasculares graves de un 20%. No hubo evidencia de valor umbral de cLDL en los estudios incluidos en la revisión, lo que sugiere que una reducción del cLDL de 2-3 mmol/L reduciría el riesgo en un 40-50%.

- Las recomendación de alcanzar un cLDL <70 mg/dL lleva implícita la asunción de que alcanzar dicho valor es un potente predicador del beneficio que va a obtener el paciente, independientemente de todos los factores de confusión conocidos, incluyendo el o los tratamientos.
- La hipótesis lineal sugiere que, independientemente de otros factores de riesgo, el logaritmo de la reducción del riesgo relativo de sufrir un episodio cardiovascular se asocia de forma lineal con el nivel de cLDL. No obstante, aunque la reducción del riesgo relativo es constante, la reducción absoluta del riesgo disminuye progresivamente.
- Ejemplo: reducir el cLDL en 30 mg/dL se asocia con una disminución del 24% del RR en todos los casos. Pero la RAR es mucho mayor cuando el cLDL es reducido de 220 a 190 mg/dL que cuando se reduce de 100 a 70 mg/dL. Así mismo, el beneficio absoluto es mayor cuando se compara un paciente de alto con uno de bajo riesgo. La gráfica superior predice la reducción del riesgo cardiovascular en una mujer de 65 años, diabética, con una PS de 145 mm Hg, un cHDL de 21 mg/dL, unos TG de 300 mg/dL y una HbA1c del 7%. La inferior predice la reducción del riesgo CV de una mujer de 60 años, diabética, una PS de 125 mm Hg, un cHDL de 55 mg/dL, unos TG de 100 mg/dL y una HbA1c del 7%.

Beneficios Absolutos de la reducción de LDL-c

NNT 20



NNT 66

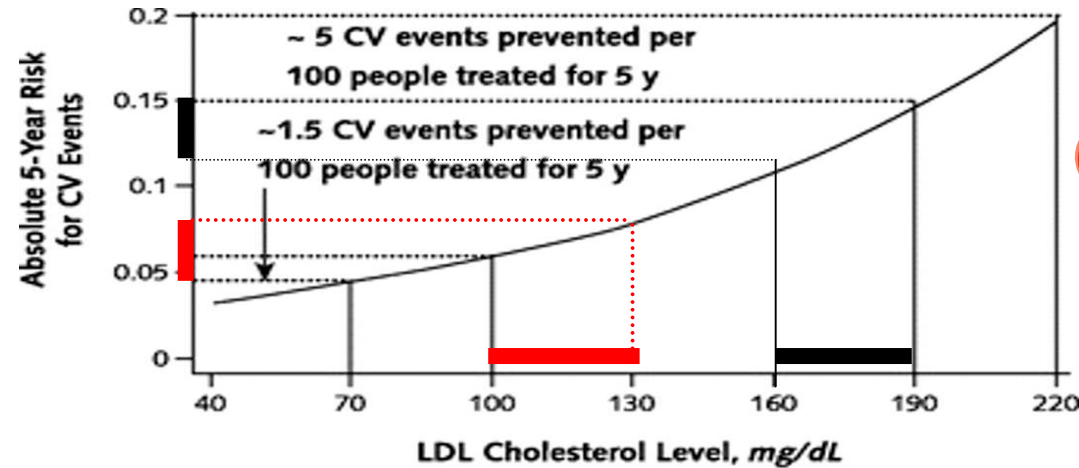
NND 21



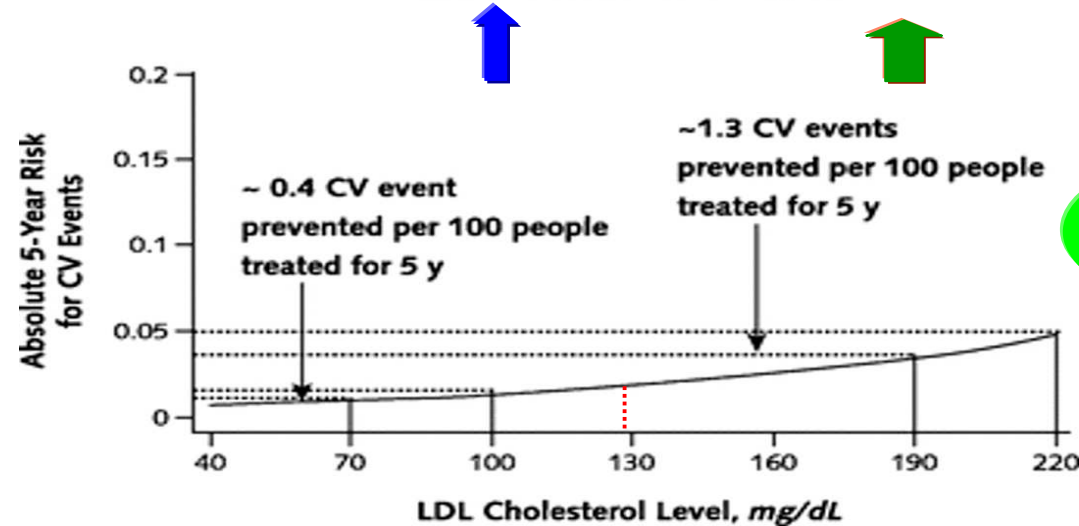
NND 26

NNT 77

NNT 250



ALTO
RCV



Bajo
RCV

Compodosis	Importe	Envases
	1.761.519,34	244.581
Total DISTRITO	1.761.519,34	244.581
SIMVASTATINA 20MG - ORAL	33.372,42	16.521
SIMVASTATINA 40MG - ORAL	55.835,72	20.378
TOTAL SIMVA 20+40	89.208,14	
ATORVASTATINA 10MG - ORAL	76.233,00	16.521
ATORVASTATINA 20MG - ORAL	187.682,23	20.378
TOTAL ATORV 10+20	263.915,23	

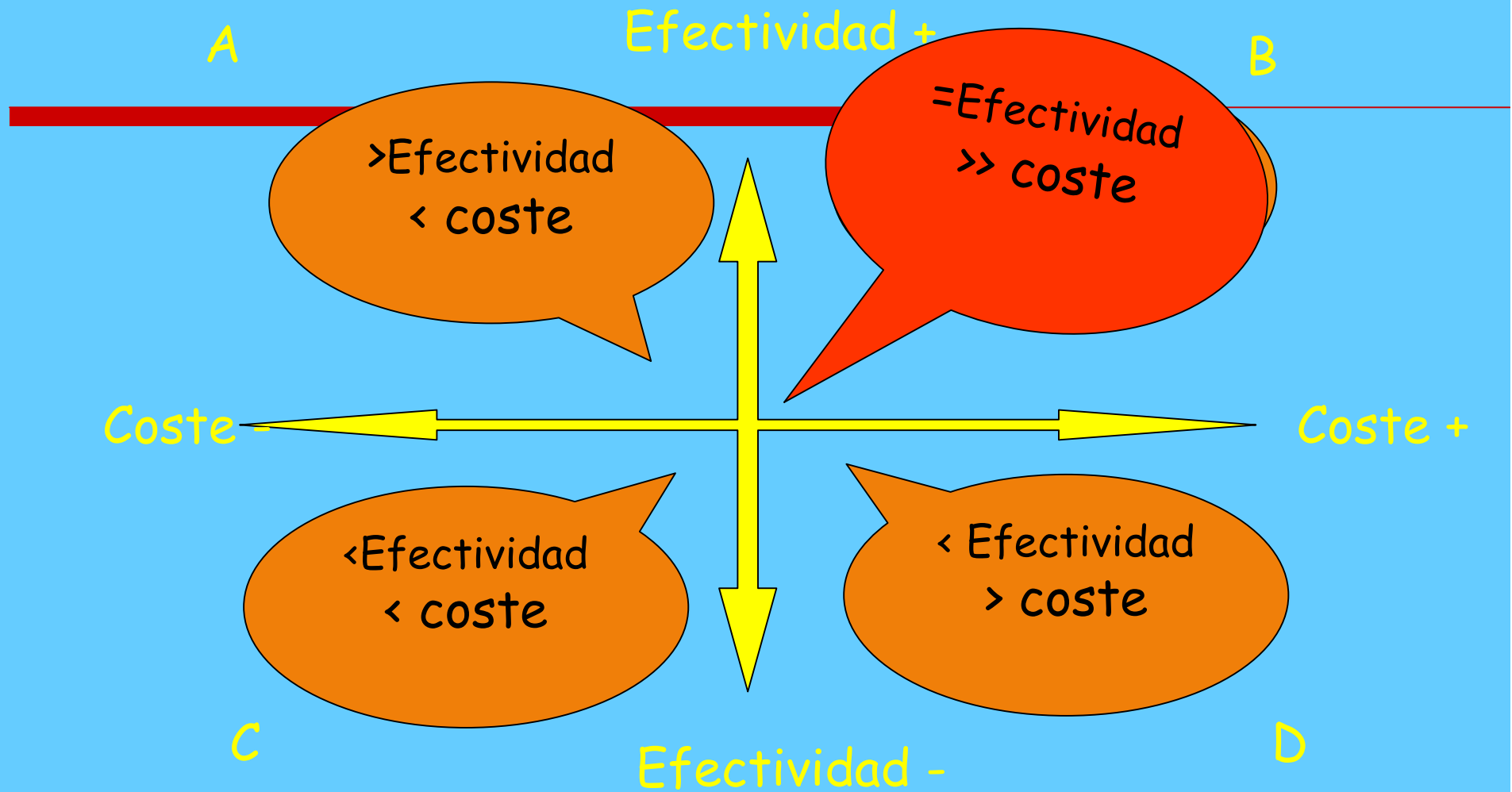
DIFERENCIA DE 174.707,09€ POR EL CAMBIO EN DISTRITO

59

Más de medio millón de euros en ezetimibe en el distrito

Compodosis	Importe	Envases	P.V.P por Envase		
ATORVASTATINA 10MG	76.233,00	16.521	4,61		
ATORVASTATINA 20MG	187.682,23	20.378	9,21		
ATORVASTATINA 40MG	275.064,50	14.866	18,50		
ATORVASTATINA 80MG	283.018,84	7.617	37,16	Cambio 2:1	Cambio 4:1
PITAVASTATINA 1MG	7.817,04	376	20,79	6082	4354
PITAVASTATINA 2MG -	40.612,42	1.423	28,54	27507	14283
PITAVASTATINA 4MG	12.155,20	284	42,80	6900	1603
ROSUVASTATINA 10MG	143.036,40	5.512	25,95	92271	41048
ROSUVASTATINA 20MG	95.782,12	2.461	38,92	50246	4341
ROSUVASTATINA 5MG -	48.535,20	2.568	18,90	36686	24884
			Diferencia Total	219.692 €	90.512 €

60



Conclusiones

- ❑ Las dosis intensivas son equivalentes entre ellas (podemos debatir sobre su eficiencia con dosis moderadas)
- ❑ En las asociaciones no se puede hablar de eficiencia (implica que es más efectivo a mayor coste y NO LO HAN DEMOSTRADO)

ISC: indicador para todos:

**UDs Simvastatina/UDs Hipolipemiantes
excluida atorva 80mg**

Posible indicador:

**UDs atorva 40-80/Uds PITa-Rosu-
Ezetimibe**

