



Dr Juan Pablo Argüello



# Riesgo de enfermedad cardiovascular precoz

# Se puede prevenir?

• IAM

• STROKE

# Que datos tenemos de enfermedad precoz

RHEUMATOLOGY

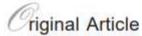
Rheumatology 2013;52:1163-1171 doi:10.1093/rheumatology/ket106 Advance Access publication 15 March 2013

Review

Cardiovascular risk in juvenile idiopathic arthritis

Elizabeth J. Coulson<sup>1</sup>, Wan-Fai Ng<sup>1,2</sup>, Iain Goff<sup>1</sup> and Helen E. Foster<sup>1,2</sup>

El riesgo a largo plazo de enfermedad cardiovascular para las paciente con AIJ sigue siendo incierto.



## Assessment of left ventricular systolic and diastolic function in juvenile rheumatoid arthritis

Bharti BB, Kumar S, Kapoor A, Agarwal A\*, Mishra R\*, Sinha N\*

#### Materials and Methods

Thirty-five children with JRA (American College of Rheumatology criteria) <sup>5</sup> seen in the department of Clinical Immunology outpatient clinic between January 2001 and January 2002 were included in the study after obtaining verbal informed consent from parents or eligible and competent adult patients. The control group consisted of children presenting to the paediatric outpatient department and included 35 age- and sex- matched healthy controls.

Mas de un tercio de los paciente mantienen la enfermedad activa persistente hasta la edad adulta

El mayor riesgo se atribuye a una mayor prevalencia de factores de riesgo cardiovascular tradicionales y al papel de inflamación sistémica en la aceleración de la aterosclerosis

Cuales son los factores de riesgo CV??

- Tabaquismo
- HTA
- DBT
- Obesidad
- Actividad física disminuida
- Tratamiento con corticoides y AINES

## Tabaquismo

Arthritis Care Res. 1998 Oct;11(5):391-6.

Substance use among adolescents with juvenile rheumatoid arthritis.

Nash AA1, Britto MT, Lovell DJ, Passo MH, Rosenthal SL.

#### Author information

Division of Adolescent Medicine, Children's Hospital Medical Center, Cincinnati, OH 45229-3039, USA.

 Se cree que los jóvenes con AIJ están menos expuestos que grupos de control sanos

## Dislipidemia

TABLE 1 Abnormalities of the lipid profile in JIA

	JIA subtypes (n)	N	Lipid profile in JIA compared with controls	Drug therapy
llowite et al. [50]	Systemic [9] Pauciarticular [15] Polyarticular [11]	35	↓ Total cholesterol ↓ LDL ↓ HDL ↑ Triglycerides ↑ VLDL	Excluded if had received corticosteroid within 6 months
Tselepis et al. [51]	Polyarticular [15] Pauciarticular [8] Systemic [3]	26	↓ HDL † Triglycerides <sup>a</sup>	NSAIDs [23] MTX [10] Methylprednisolone [6]
Gonçalves et al. [52]	Oligo [22] Polyarticular [17] Systemic [12]	51	↓ HDL ↑ Triglycerides ↑ VLDL	MTX NSAIDs Chloroquine Systemic steroids
Bakkaloglu et al. [53]	Oligo [19] Polyarticular [16] Systemic [2]	37	<ul> <li>✓ Total cholesterol</li> <li>✓ Triglycerides</li> <li>✓ HDL</li> <li>↓ LDL</li> </ul>	No patients receiving steroid therapy
Marangoni et al. [54]	Polyarticular only	28	↓ HDL  ↑ LDL  ↑ Triglycerides  ↑ Total cholesterol	Steroids Chloroquine MTX/AZA [12] No biologic use
Breda et al. [41]	Oligo Polyarticular	38	↑ Total cholesterol ↑ LDL ↑ Triglycerides ∨ HDL	NSAIDs/DMARDs (predominantly MTX) alone [22 Etanercept [16]

#### Obesidad

Pelajo et al. Pediatric Rheumatology 2012, 10:3 http://www.ped-rheum.com/content/10/1/3



#### SHORT REPORT

Open Access

Obesity and disease activity in juvenile idiopathic arthritis

Christina F Pelajo\*, Jorge M Lopez-Benitez and Laurie C Miller

#### Obesidad

• Presentan disminución de la actividad física

Tratamiento con CTC

#### **DBT**

- Los pacientes con AlJ tienen mayor prevalencia de DBT tipo I
- En AR hay mayor incidencia de insulino resistencia y DBT
- El tratamiento con CTC aumenta el riesgo de insulino resistencia

#### HTA

 La TA en niños con AlJ es mayor que en casos controles, pero dentro de rangos de normalidad

#### Actividad Física

- Se recomienda realización de actividad física regular de intensidad moderada
- El dolor es la principal limitación

### Enfermedad inflamatoria activa

Disfunción endotelial  $\longrightarrow$  1 ateroesclerosis

Arthritis Care & Research Vol. 63, No. 12, December 2011, pp 1736–1744 DOI 10.1002/acr.20613 © 2011, American College of Rheumatology

ORIGINAL ARTICLE

## Changes in Vascular Function and Structure in Juvenile Idiopathic Arthritis

ANTONIOS P. VLAHOS, PARASKEVI THEOCHARIS, ARIS BECHLIOULIS, KATERINA K. NAKA,

La función endotelial se ve afectada en pacientes con AIJ a una edad muy temprana. La disfunción vascular puede atribuirse en parte a los efectos de las características relacionadas con la enfermedad (inflamación, actividad de la enfermedad y medicamentos).

El aumento de los marcadores de actividad inflamatoria (PCR) y la actividad de la enfermedad son FR independientes de morbi-mortalidad CV en AR

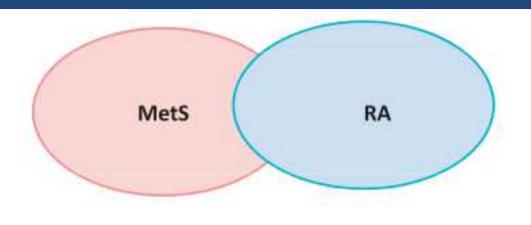
RHEUMATOLOGY

Rheumatology 2011;50:1944-1954 doi:10.1093/rheumatology/ker232 Advance Access publication 13 July 2011

#### Review

Cardiovascular risk and rheumatoid arthritis—the next step: differentiating true soluble biomarkers of cardiovascular risk from surrogate measures of inflammation

Lukasz Kozera<sup>1</sup>, Jacqueline Andrews<sup>1,\*</sup> and Ann W. Morgan<sup>1,\*</sup>



↑TNF, ↑IL-6, ↑CRP, ↑leptin ,↑resistin, ↑/↓adiponectin, ↑insulin, ↑glucose ↑TNF, ↑IL-1, ↑IL-6, ↑CRP, ↑SAA, ↑leptin, ↑adiponectin , ↑visfatin ↑insulin, ↑glucose



Endothelial dysfunction: ↑MCP-1, ↑sICAM-1, ↑sVCAM-1, ↑sE-selectin, ↓ sL-selectin, ↑VWF, ↑tPA, ↑PAI-1



Plaque instability: 

MMP9, 

myeloperoxidase, 

scD40L



Cardiac overload/ Ventricular dysfunction: TNT-proBNP

# Que rol juegan los fármacos en el riesgo CV??

### Corticoides

- HTA
- Insulino-resistencia
- Aumento de peso

### **AINES**

• HTA

Se asocian a mayor riesgo CV

LOS TRATAMIENTOS CON TNF Y METROTEXATE REDUCEN EL RIESGO CV, EL GROSOR DE LA INTIMA CAROTIDEA Y LA INCIDENCIA DE EVENTOS CV MAYORES

#### Recommendation

EULAR recommendations for cardiovascular disease risk management in patients with rheumatoid arthritis and other forms of inflammatory joint disorders: 2015/2016 update

R Agca, <sup>1</sup> S C Heslinga, <sup>1</sup> S Rollefstad, <sup>2</sup> M Heslinga, <sup>1</sup> I B McInnes, <sup>3</sup> M J L Peters, <sup>4</sup> T K Kvien, <sup>5</sup> M Dougados, <sup>6</sup> H Radner, <sup>7</sup> F Atzeni, <sup>8</sup> J Primdahl, <sup>9,10,11</sup> A Södergren, <sup>12</sup> S Wallberg Jonsson, <sup>12</sup> J van Rompay, <sup>13</sup> C Zabalan, <sup>14</sup> T R Pedersen, <sup>15</sup> L Jacobsson, <sup>16,17</sup> K de Vlam, <sup>18</sup> M A Gonzalez-Gay, <sup>19</sup> A G Semb, <sup>20</sup> G D Kitas, <sup>21</sup> Y M Smulders, <sup>4</sup> Z Szekanecz, <sup>22</sup> N Sattar, <sup>23</sup> D P M Symmons, <sup>24</sup> M T Nurmohamed <sup>25</sup>

		Level of evidence	Strength of recommendation	Level of agreement (SD)
B C				
R	ecommendations			
1	Disease activity should be controlled optimally in order to lower CVD risk in all patients with RA, AS or PsA	2b-3	В	9.1 (1.3)
	CVD risk assessment is recommended for all patients with RA, AS or PsA at least once every 5 years and should be considered following major changes in antirheumatic therapy	3–4	С	8.8 (1.1)
	CVD risk estimation for patients with RA, AS or PsA should be performed according to national guidelines and the CORE CVD risk prediction model should be used if no national guideline is available	3–4	C-D	8.7 (2.1)
	TC and HDLc should be used in CVD risk assessment in RA, AS and PsA and lipids should ideally be measured when sease activity is stable or in remission. Non-fasting lipids measurements are also perfectly acceptable	3	С	8.8 (1.2)
	CVD risk prediction models should be adapted for patients with RA by a 1.5 multiplication factor, if this is not already cluded in the model	3–4	С	7.5 (2.2)
	Screening for asymptomatic atherosclerotic plaques by use of carotid ultrasound may be considered as part of the CVD sk evaluation in patients with RA	3-4	C-D	5.7 (3.9)
	Lifestyle recommendations should emphasise the benefits of a healthy diet, regular exercise and smoking cessation for I patients	3	С	9.8 (0.3)
	CVD risk management should be carried out according to national guidelines in RA, AS or PsA, antihypertensives and atins may be used as in the general population	3–4	C-D	9.2 (1.3)
	Prescription of NSAIDs in RA and PsA should be with caution, especially for patients with documented CVD or in the resence of CVD risk factors	2a-3	С	8.9 (2.1)
g	<ol> <li>Corticosteroids: for prolonged treatment, the glucocorticoid dosage should be kept to a minimum and a ucocorticoid taper should be attempted in case of remission or low disease activity; the reasons to continue ucocorticoid therapy should be regularly checked</li> </ol>	3–4	С	9.5 (0.7)

## CONCLUSIÓN

Incorporar el riesgo CV como parte de la atención clínica rutinaria de estos pacientes.

Muchas gracias!!!