Métodos Anticonceptivos en Mujeres con Patologías Crónicas

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Objetivo

- Reconocer las características médicas y del estilo de vida que podrían interactuar con un determinado MAC llevando al deterioro de la salud de la persona.

Asumiremos que...

- La persona desea utilizar MAC
- La persona practica relaciones sexuales con riesgo de embarazo
- La persona cursa con una condición de alto riesgo para su salud

Mayor detalle respecto a conductas durante la atención serán vistos en otra clase

¿Por qué es relevante?

Equilibrio

Riesgo

Enfermedad **vs** **Embarazo**

- Breast cancer
- Complicated valvular heart disease
- Diabetes: insulin-dependent; with nephropathy/retinopathy/neuropathy or other vascular disease; or of >20 years' duration
- Endometrial or ovarian cancer
- Epilepsy
- Hypertension (systolic >160 mm Hg or diastolic >100 mm Hg)
- History of bariatric surgery within the past 2 years
- HIV/AIDS
- Ischemic heart disease
- Malignant gestational trophoblastic disease
- Malignant liver tumors (hepatoma) and hepatocellular carcinoma of the liver
- Peripartum cardiomyopathy
- Schistosomiasis with fibrosis of the liver
- Severe (decompensated) cirrhosis
- Sickle cell disease
- Solid organ transplantation within the past 2 years
- Stroke
- Systemic lupus erythematosus
- Thrombogenic mutations
- Tuberculosis

http://www.cdc.gov/reproductivehealth/UnintendedPregnancy/Contraception_Guidance.htm

Condiciones Médicas Relevantes

Epilepsia

Problemas hepáticos

→ Metabolización del fármaco

Riesgo cardiovascular

→ Tromboembolismo

→ Aumento de presión arterial (Lubianca 2005)

Epilepsia

Effect of Topiramate or Carbamazepine on the Pharmacokinetics of an Oral Contraceptive Containing Norethindrone and Ethinyl Estradiol in Healthy Obese and Nonobese Female Subjects

*Dennis R. Doose, *Shean-Sheng Wang, *Mukund Padmanabhan, *Stefan Schwabe, *David Jacobs, and †Meir Bialer

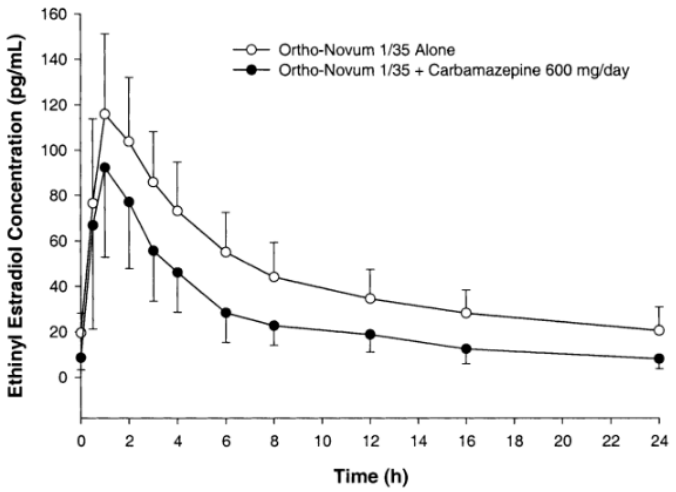


FIG. 6. Mean (SD) plasma concentration–time profiles of ethinyl estradiol after multiple doses of ORTHO-NOVUM 1/35 with or without coadministration of carbamazepine for group 5 (600 mg/day CBZ, nonobese).

TABLE 6. *Norethindrone and ethinyl estradiol pharmacokinetic parameters after coadministration of carbamazepine, 600 mg/day, to healthy nonobese subjects*

Parameter	Alone (cycle 1)	With carbamazepine[b] (cycle 2)	p value[c]	% change in mean (cycle 2–cycle 1)/cycle 1
Norethindrone				
t_{max} (h)[a]	1	1		—
C_{max} (ng/ml)	17.2 (7.5)	10.8 (5.2)	0.0721	−37.3
AUC (ng · h/ml)	126 (77)	53.1 (24)	0.0003[d]	−57.9
CL/F (L/h)	14.9 (19)	25.1 (18)	0.0003[d]	68.7
Ethinyl estradiol				
t_{max} (h)[a]	1	1		—
C_{max} (pg/ml)	117 (34)	95.5 (41)	0.1505	−19.3
AUC (pg · h/ml)	1,062 (345)	616 (244)	0.0001[d]	−42.0
CL/F (L/h)	37.2 (16)	84.3 (91)	0.0001[d]	57.5

[a] Median value.
[b] Arithmetic mean (SD).
[c] Analysis on log-transformed data.
[d] Significant at $\alpha = 0.05$.

CBZ → Inducción → CYP 3A

Inducción → Glucoronidación (metabolización fase II)

Efectos Hepáticos

Review

Beneficial and Deleterious Effects of Female Sex Hormones, Oral Contraceptives, and Phytoestrogens by Immunomodulation on the Liver

Luis E. Soria-Jasso [1], Raquel Cariño-Cortés [1], Víctor Manuel Muñoz-Pérez [1], Elizabeth Pérez-Hernández [2], Nury Pérez-Hernández [3] and Eduardo Fernández-Martínez [1,*]

Efectos genómicos

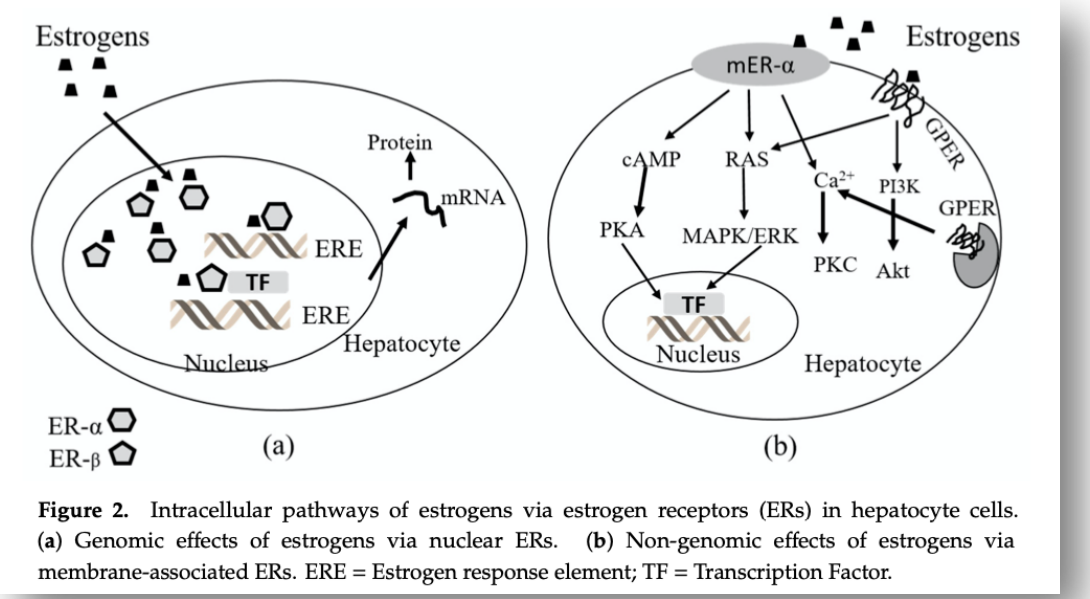


Figure 2. Intracellular pathways of estrogens via estrogen receptors (ERs) in hepatocyte cells. (**a**) Genomic effects of estrogens via nuclear ERs. (**b**) Non-genomic effects of estrogens via membrane-associated ERs. ERE = Estrogen response element; TF = Transcription Factor.

Efectos vía segundos mensajeros

Review article

Hepatic complications of oral contraceptive pills and estrogen on MRI: Controversies and update - Adenoma and beyond☆

Janardhana Ponnatapura[a,f], Ania Kielar[b,c], Lauren M.B. Burke[d], Mark E. Lockhart[e], Abdul-Rahman Abualruz[a], Rafel Tappouni[a,f], Neeraj Lalwani[a,f,*]

ORIGINAL PAPER

WILEY

HTA

Association between duration of oral contraceptive use and risk of hypertension: A meta-analysis

Hui Liu MD | Jie Yao MD | Weijing Wang MD | Dongfeng Zhang MD

A meta-analysis was conducted to evaluate the association between duration of oral contraceptive use and risk of hypertension. Relevant studies published in English or Chinese were identified by a search of PubMed, Web of Science, Wanfang Database, and China National Knowledge Infrastructure to January 2017. Seventeen articles containing 24 studies with 270,284 participants were included in this meta-analysis. The pooled relative risk of hypertension for the highest vs lowest category of oral contraceptive duration was 1.47 (95% confidence interval, 1.25–1.73), and excluding three studies with a relative risk >3.0 yielded a pooled relative risk of 1.26 (95% confidence interval, 1.11–1.44). A linear dose-response relationship was found ($P_{nonlinearity}$=0.69) and the risk of hypertension increased by 13% (relative risk, 1.13; 95% confidence interval, 1.03–1.25) for every 5-year increment in oral contraceptive use. The duration of oral contraceptive use was positively associated with the risk of hypertension in this meta-analysis.

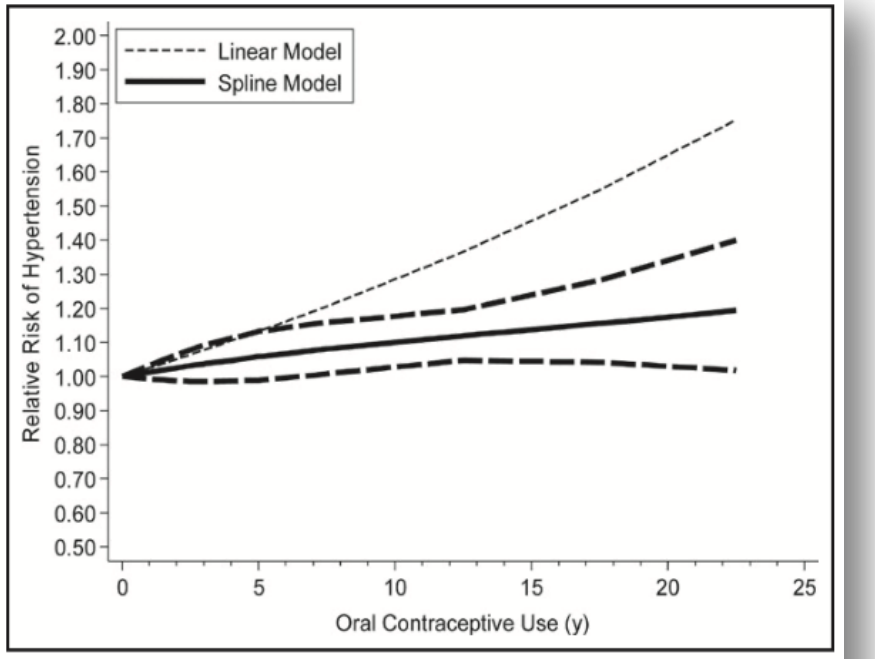


FIGURE 3 The dose-response analysis between oral contraceptive use and the risk of hypertension with restricted cubic splines in a multivariate random-effects dose-response model. The solid lines and long dash lines represent the estimated relative risks (RRs) and their 95% confidence intervals (CIs). The short dash lines represent the linear relationship

HTA

ORIGINAL ARTICLE

Stopping oral contraceptives: an effective blood pressure-lowering intervention in women with hypertension

JN Lubianca[1], LB Moreira[1,2], M Gus[1,3] and FD Fuchs[1,3]

Table 2 BP (mmHg) at baseline and follow-up (means ± s.d.), with the corresponding deltas (means ± s.e.), in women who stopped and did not stop using OC

Blood pressure	*Stopped OC*	*Baseline*	*Follow-up*	*Delta**	P*	*Delta** adjusted*	P**
SBP	Yes	152.7 ± 20.3	139.3 ± 18	13.7 ± 3.1	0.09	15.1 ± 2.6	0.004
	No	159.0 ± 28.0	154.0 ± 21.8	5.0 ± 4.1		2.8 ± 3.2	
DBP	Yes	98.7 ± 10.8	89.7 ± 11.2	9.3 ± 1.9	0.22	10.4 ± 1.8	0.008
	No	103.0 ± 20.5	98.7 ± 14	4.3 ± 3.7		2.7 ± 2.2	

SBP, systolic blood pressure; DBP, diastolic blood pressure; OC, oral contraceptives.
*Student's *t*-test for independent samples.
**Adjusted for the respective baseline BP and age.

Pasos a Seguir

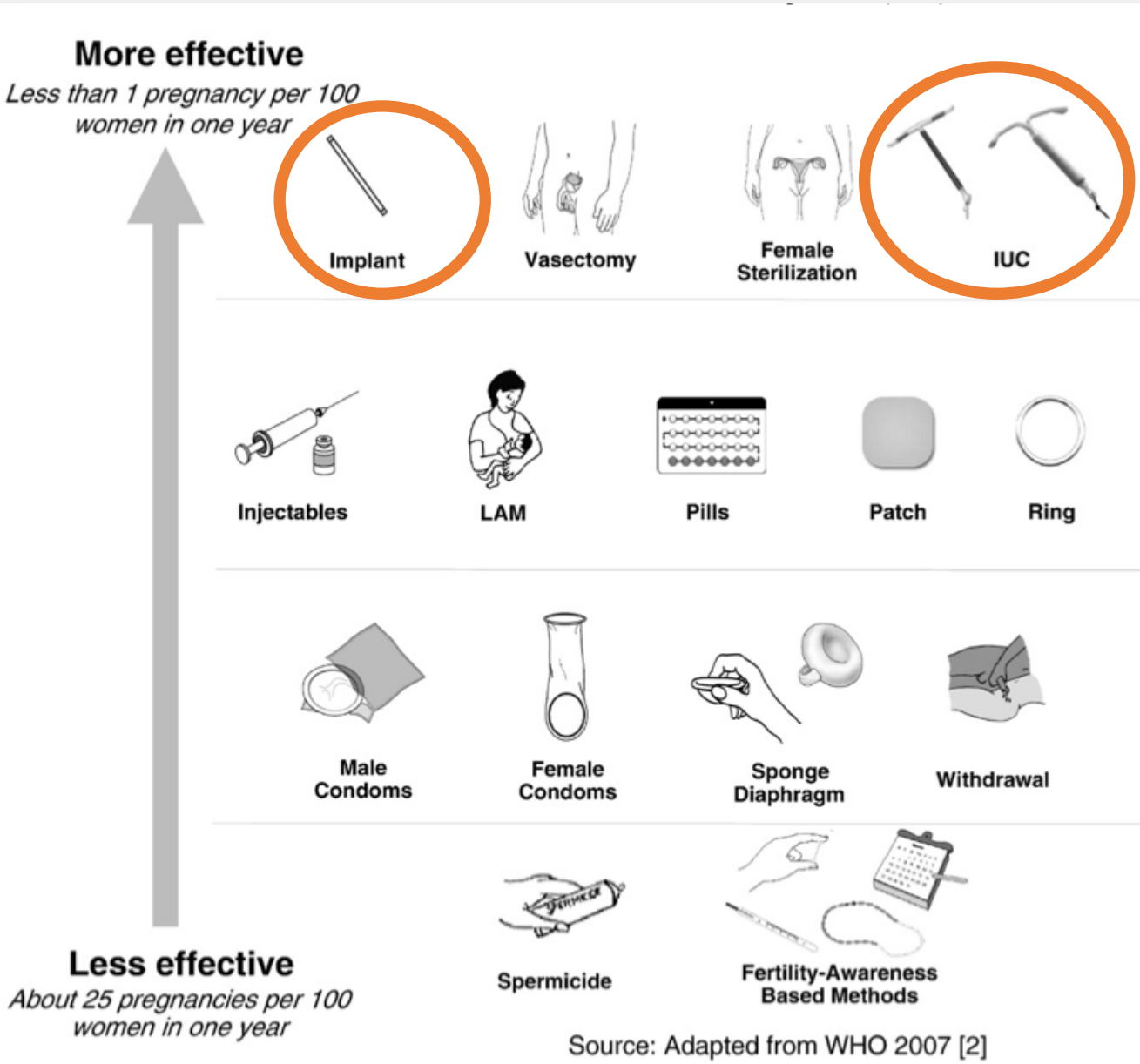
Determinar historia médica

Educar respecto a los distintos MAC disponibles

Informar respecto a los criterios de elegibilidad*

Pasos a Seguir

Métodos Reversibles de Larga Duración (LARCS)



Source: Adapted from WHO 2007 [2]

Effectiveness of Long-Acting Reversible Contraception

Brooke Winner, M.D., Jeffrey F. Peipert, M.D., Ph.D., Qiuhong Zhao, M.S., Christina Buckel, M.S.W., Tessa Madden, M.D., M.P.H., Jenifer E. Allsworth, Ph.D., and Gina M. Secura, Ph.D., M.P.H.

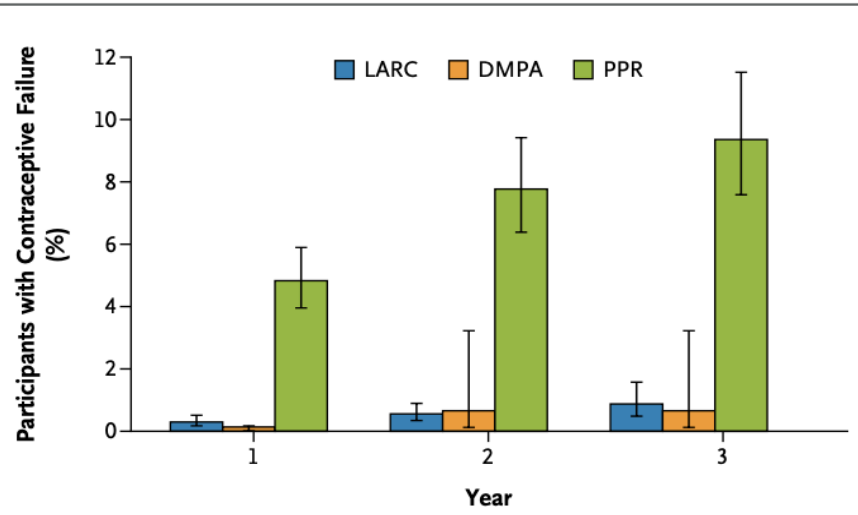


Figure 1. Cumulative Percentage of Participants Who Had a Contraceptive Failure at 1, 2, or 3 Years, According to Contraceptive Method.

Bars depict the cumulative percentage of participants who had a contraceptive failure with long-acting reversible contraception (LARC), depot medroxyprogesterone acetate (DMPA), or pill, patch, or ring (PPR) at 1, 2, or 3 years. Participants using PPR had significantly more unintended pregnancies than those using LARC (P<0.001) or DMPA (P<0.001).

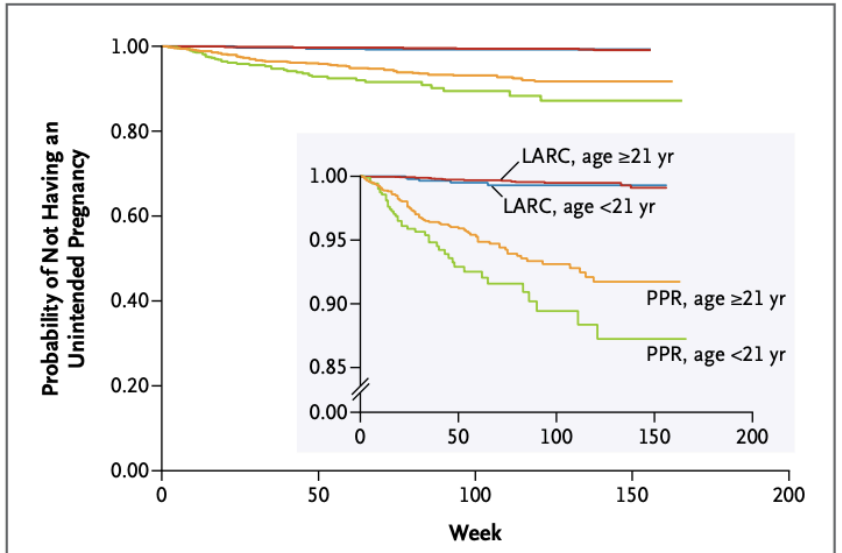


Figure 2. Probability of Not Having an Unintended Pregnancy, According to Contraceptive Method and Age.

Survival curves show the probability of not having an unintended pregnancy, stratified according to age group. LARC methods were the most effective, and failure rates did not vary according to age (P=0.49). PPR methods were less effective, and failure rates in participants younger than 21 years old were twice as great as in women 21 years of age or older (P=0.02).

Limitaciones del estudio?

Edad de las participantes

Mensajes Para Llevar a Casa

- Conocer historia clínica en detalle
- Consultar criterios de elegibilidad
- Balance entre riesgo/beneficio de uso de MAC
- Respetar la decisión de la persona

Referencias

- Doose DR, Wang SS, Padmanabhan M. et al. Effect of topiramate or carbamazepine on the pharmacokinetics of an oral contraceptive containing norethindrone and ethinyl estradiol in healthy obese and nonobese female subjects. Epilepsia, 44(4):540-549, 2003.
- Soria-Jasso LE, Cariño-Cortés R, Muñoz-Pérez VM et al. Beneficial and deleterious effects of female sex hormones, oral contraceptives, and phytoestrogens by immunomodulation on the liver. *Int. J. Mol. Sci.* **2019**, *20*, 4694; doi:10.3390/ijms20194694.
- Ponnatapura J, Kielar A, Burke LMB et al. Hepatic complications of oral contraceptive pills and estrogen on MRI: controversies and update – adenoma and beyond. Magnetic Resonance Imaging 60 (2019). 110-121.
- Liu H, Yao J, Wang W and Zhang D. Association between duration of oral contraceptive use and risk of hypertension: A meta-analysis. J Clin Hypertens (Greenwich). 2017 Oct;19(10):1032-1041.
- Lubianca JN, Moreira LB, Gus M and Fuchs FD. Stopping oral contraceptives: and effective blood pressure-lowering intervention in women with hypertension. Journal of Human Hypertension (2005) 19, 451-455
- Trussell J. Contraceptive failure in the United States. Contraception. 2011;83:397–404.
- Winner B, Peipert JF, ZhaoQ, et al. Effectiveness of long-acting reversible contraception. N Engl J Med. 2012;366:1998–2007.