

27 DE ABRIL – SÁBADO

SESSÃO TELEVOTER HIPERTENSÃO

ANTÓNIO PEDRO MACHADO

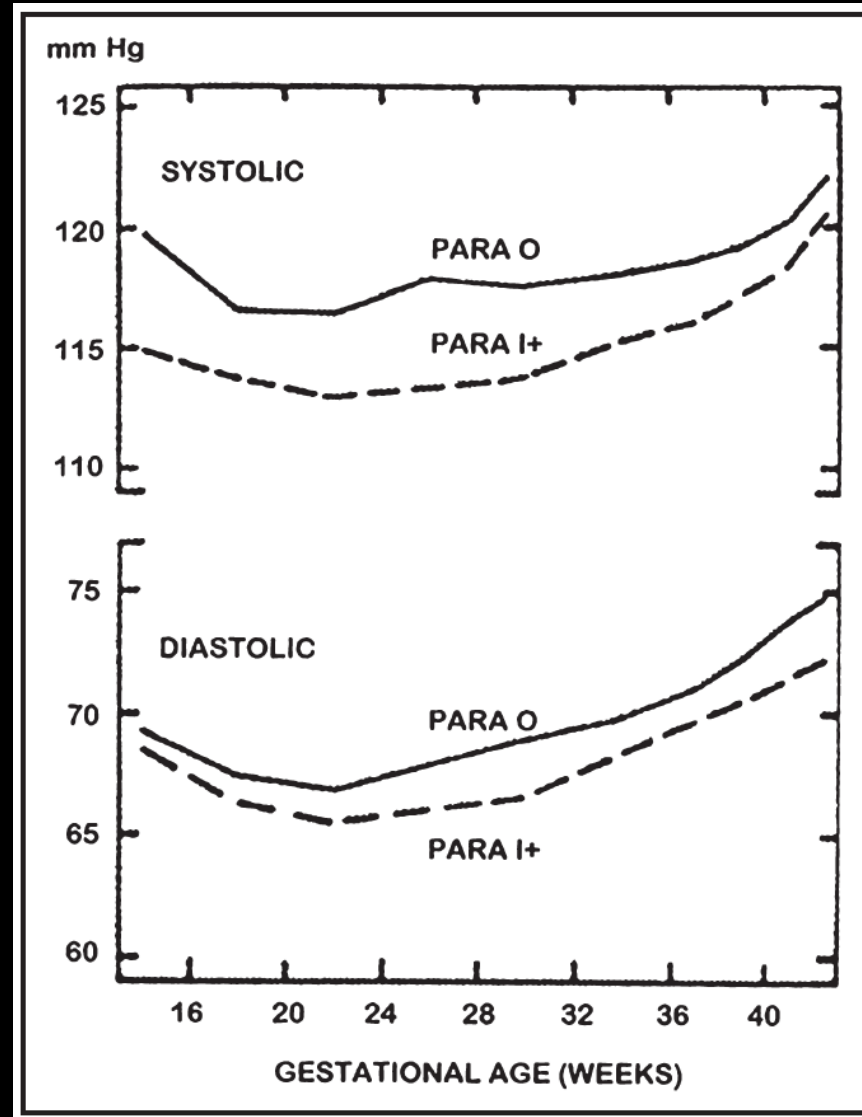
CARLOS RABAÇAL

JOANA BORDALO

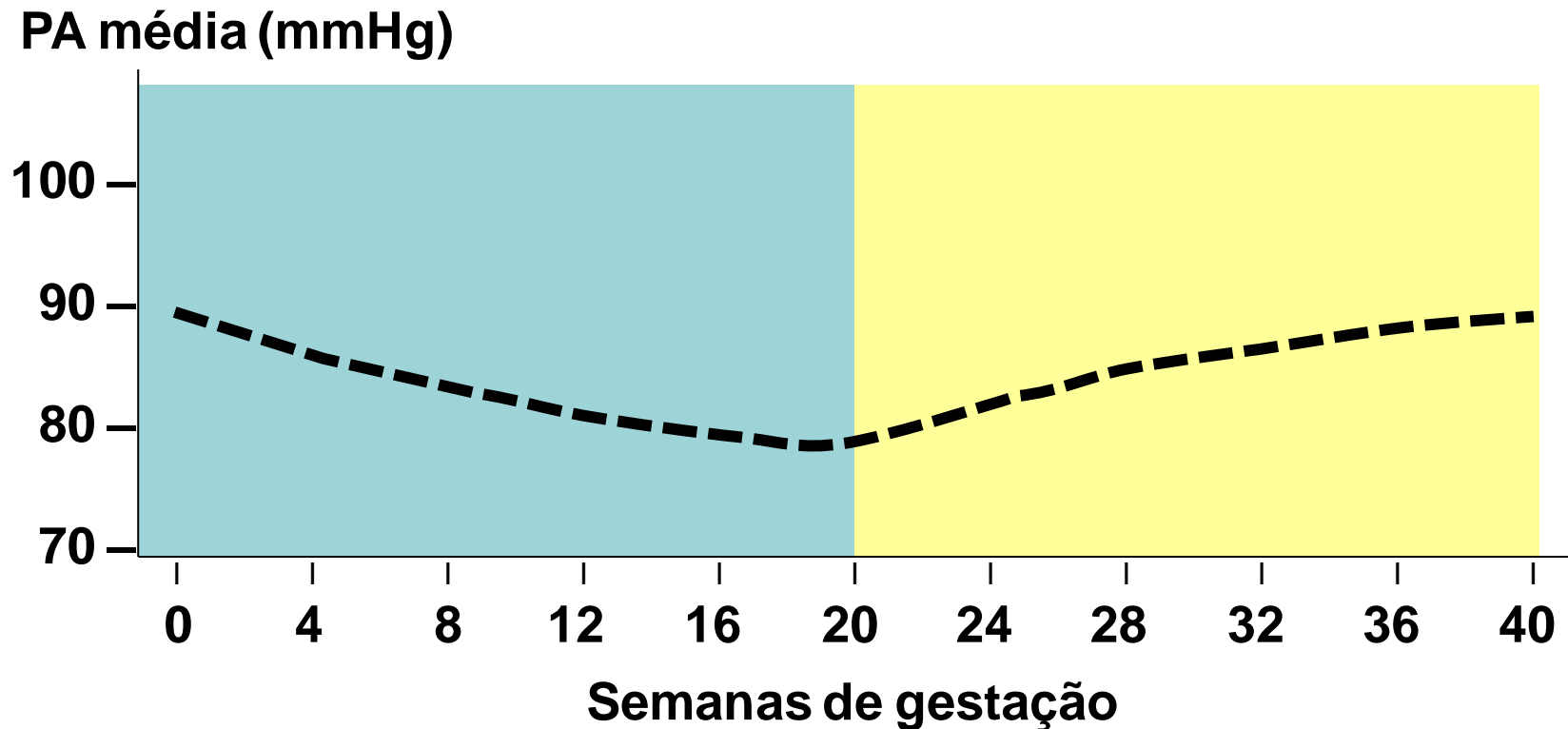


Hipertensão na gravidez

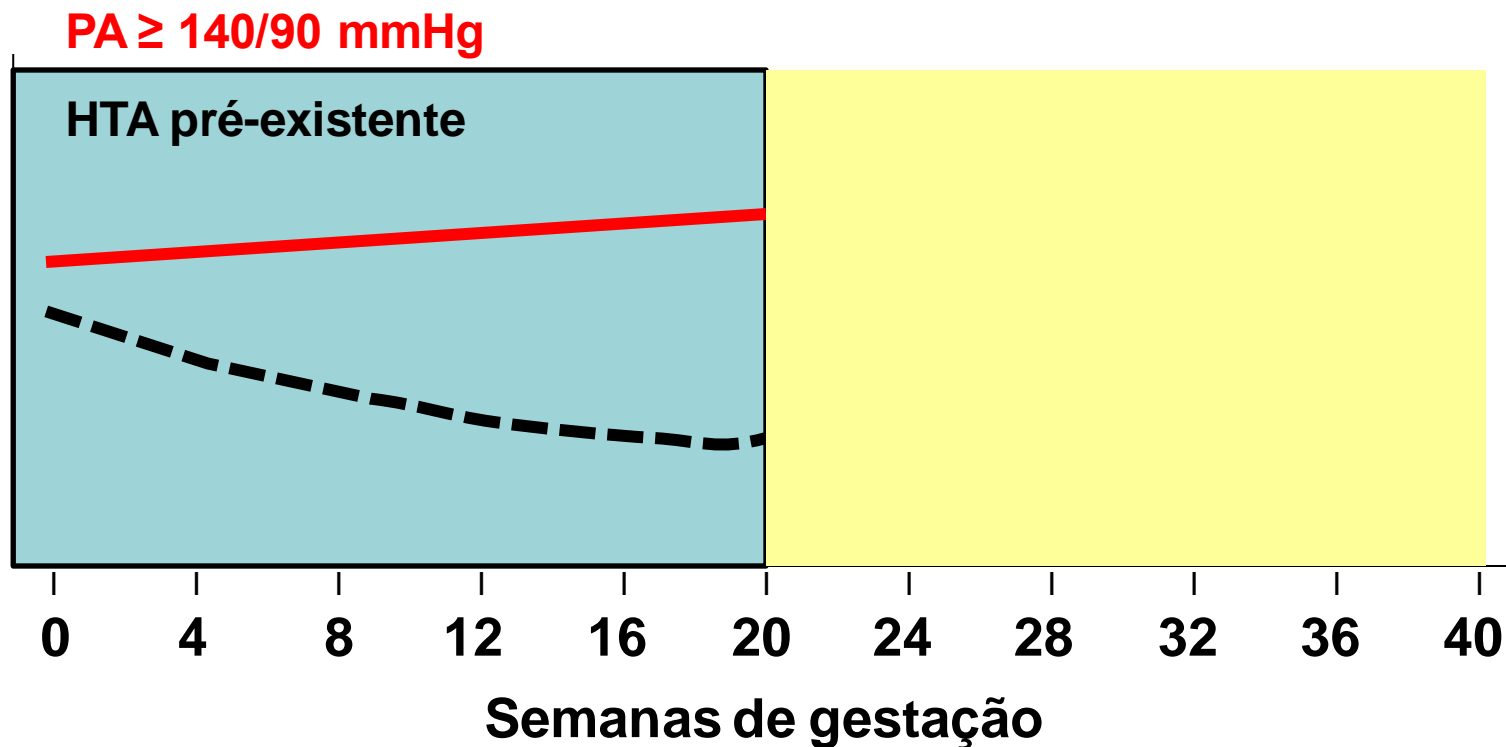
Evolução da PA durante a gravidez em 6000 mulheres entre os 25 e os 34 anos



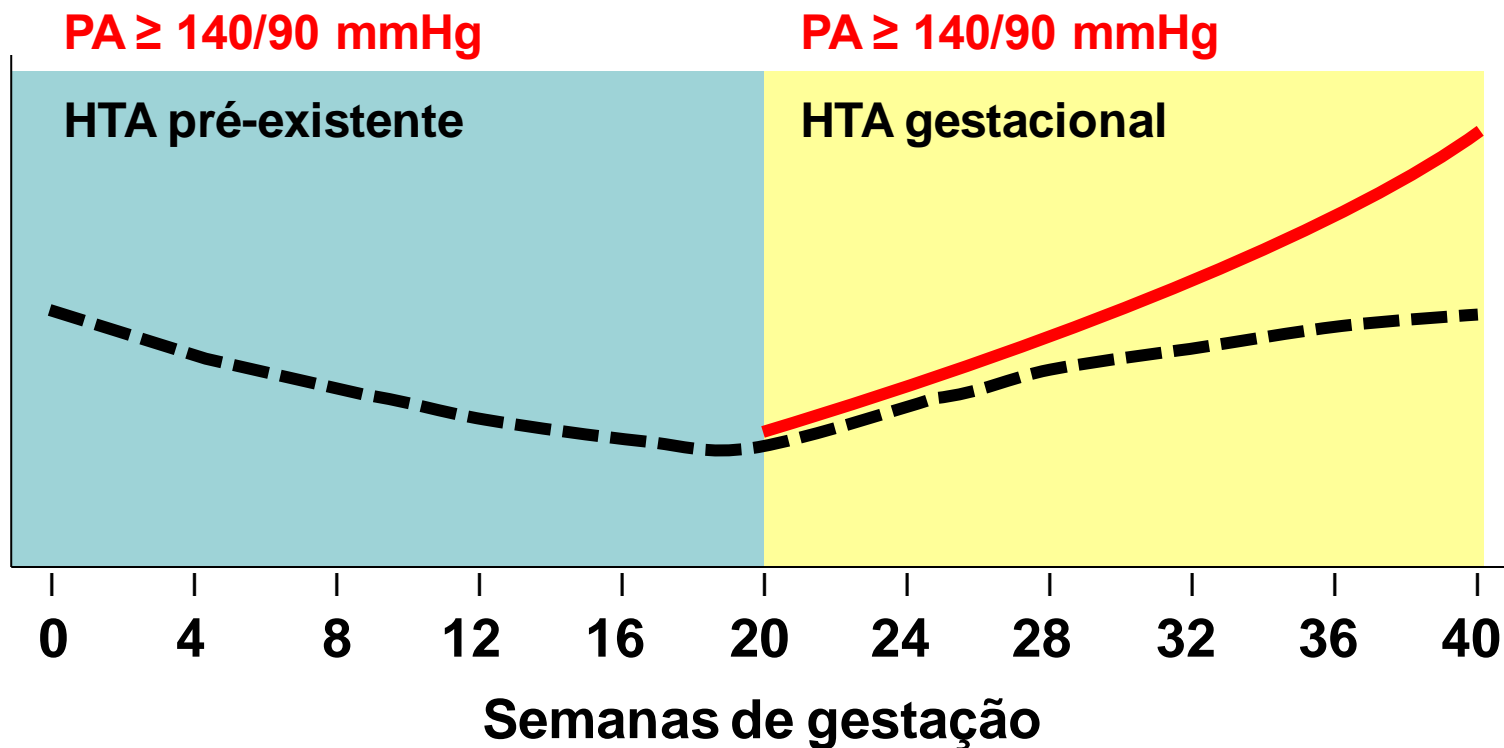
Evolução da PA média durante a gravidez (normal)



Classificação da HTA na grávida



Classificação da HTA na grávida



Hipertensão durante a gravidez

Definições

Hipertensão

PA \geq 140/90 mmHg

em mulher previamente normotensa

Situação de alto risco - se subida da PAS 30 mmHg ou PAD 15 mmHg

Pré-eclâmpsia

Hipertensão + proteinúria \geq 300 mg/24 h **(depois das 20 semanas)**

Eclâmpsia

Hipertensão + proteinúria \geq 300 mg/24 h + convulsões

Proteinúria

≥ 300 mg/24 h

≥ 300 mg/L

em duas amostras de urina colhidas com
intervalo > 4 h

Classificação da HTA na grávida

**Hipertensão crónica
(pré-existente)**

**PA \geq 140/90 mmHg
Anterior à gravidez ou
< 20 semanas de gestação**

Hipertensão gestacional

Surge depois da 20^a semana

Pré-eclâmpsia / eclâmpsia

**Hipertensão gestacional com
proteinúria \geq 300 mg/24 h
(depois das 20 semanas)
Eclâmpsia se convulsões**

**Pré-eclâmpsia sobreposta a HTA
pré-existente**

Hipertensão pré-existente

Indicações para iniciar terapêutica anti-hipertensiva



NHBPEP 2000

- PAS 150-160 mmHg, ou PAD 100-110 mmHg
- PAD ≥ 90 mmHg
Se doença renal, ou lesão de órgão alvo

ESH/ESC 2007

- PAS ≥ 150 mmHg ou
- PAD ≥ 95 mm Hg

Indicações para terapêutica farmacológica

Hipertensão pré-existente

PA \geq 150 mmHg ou PAD \geq 95 mmHg

PAS \geq 170 mmHg ou PAD \geq 110 mmHg

Referenciar ao hospital.

Considerar estar perante uma emergência com indicação para internamento

Hipertensão pré-existente

Complicações potenciais



- Descolamento de placenta
- Insuficiência renal
- Descompensação cardíaca
- AVC
- Atraso do crescimento fetal
- Morte fetal inexplicável no 2º trimestre
- Pré-eclâmpsia (incidência de 20%)

Anti-hipertensores na gravidez

Metildopa	Segura. Fármaco de 1ª escolha. Depressão, anemia hemolítica, alt. hepáticas. Pouco potente	
Hidralazina	Extensa experiência com poucos efeitos adversos. Usado só em combinação com a metildopa. Risco de trombocitopénia neo-natal.	
Nifedipina	Pode inibir o trabalho de parto.	
Verapamil	Risco de interação com o sulfato de magnésio: bradicardia fetal	
HCTZ	Útil na HTA pré-existente. Seguro em doses baixas. Em combinação com a metildopa e vasodilatadores	
Atenolol	Contra-indicado	Atraso do crescimento intra-uterino.
IECA/ARA II	Contra-indicados	Fetopatias, oligo-hidramnios, atraso do crescimento, ins. renal neonatal.

Anti-hipertensores compatíveis com o aleitamento materno

Captopril

Enalapril

Propranolol

HCTZ

Espironolactona

Diltiazem

Nifedipina

Verapamil

Hidralazina

Metildopa

Minoxidil

Os diuréticos podem diminuir a produção de leite materno.

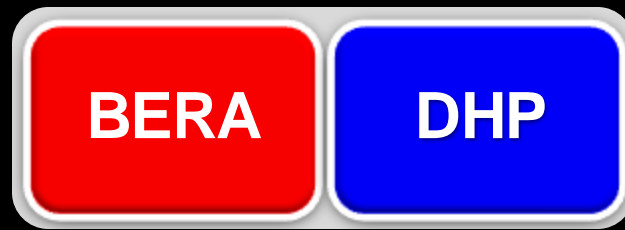
O atenolol está contra-indicado.

Sublinhado: fármacos que também podem ser usados durante a gravidez

Fuxograma terapêutico da HTA moderada a grave



A nossa selecção terapêutica



Como escolhemos o diurético para o tratamento da hipertensão

Clearance da creatinina	Diurético
> 40 mL/min	Clorotalidona (Hygroton®)
	HCTZ
< 40 mL/min	Torasemida (Tation®)
	Furosemida

A nossa selecção terapêutica



Estudo RESIST

Conhecemos o hipertenso resistente?

Joana Bordalo, José Pedro Antunes, Ana Paula Neves, M Catarina Sebe
USF Flor do Sal, UCSP Ílhavo (ACES Baixo Vouga III)

Prevalência: 19.8% (n= 248)

Factores de resistência ao tratamento

- **Idade > 75 anos** ($p < 0.005$)
- **Microalbuminúria** ($p = 0.012$)
- **Diabetes** ($p = 0.012$)
- **Duração da HTA** ($p = 0.015$)
- **HVE** ($p = 0.106$). HVE e o nº de anti-hipertensores ($p = 0.003$)

Cronoterapia da Hipertensão



Chronotherapy in Resistant Hypertension

Chronotherapy Improves Blood Pressure Control and Reverts the Nondipper Pattern in Patients With Resistant Hypertension

Ramón C. Hermida, Diana E. Ayala, José R. Fernández, Carlos Calvo

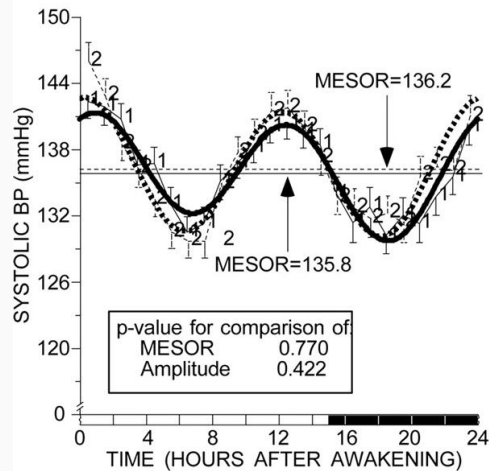
Abstract—Therapeutic strategies in resistant hypertension include adding another drug or changing drugs in search for a better synergic combination. Most patients, however, receive all of their drugs in a single morning dose. We have evaluated the impact on the circadian pattern of blood pressure on modifying the time of treatment without increasing the number of prescribed drugs. We studied 250 hypertensive patients who were receiving 3 antihypertensive drugs in a single morning dose. Patients were randomly assigned to 1 of 2 groups according to the modification in their treatment strategy: changing 1 of the drugs but keeping all 3 in the morning or the same approach but administering the new drug at bedtime. Blood pressure was measured for 48 hours before and after 12 weeks of treatment. There was no effect on ambulatory blood pressure when all of the drugs were taken on awakening. The baseline prevalence of nondipping (79%) was slightly increased after treatment (86%; $P=0.131$). The ambulatory blood pressure reduction was statistically significant (9.4/6.0 mm Hg for systolic/diastolic blood pressure; $P<0.001$) with 1 drug at bedtime. This reduction was larger in the nocturnal than in the diurnal mean of blood pressure. Thus, whereas only 16% of the patients in this group were dippers at baseline, 57% were dippers after therapy ($P<0.001$). Results indicate that, in resistant hypertension, time of treatment may be more important for blood pressure control and for the proper modeling of the circadian blood pressure pattern than just changing the drug combination. (*Hypertension*. 2008;51:69-76.)

Key Words: resistant hypertension ■ ambulatory blood pressure monitoring ■ circadian rhythm ■ chronotherapy
■ dipper ■ nondipper

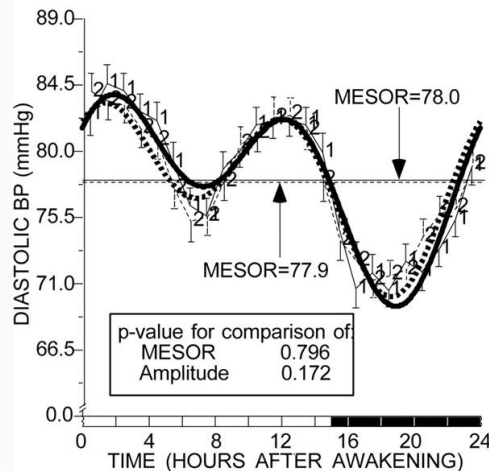
Cronoterapia da Hipertensão

Antes e após 3 meses de tratamento com 3 fármacos de manhã

PAS



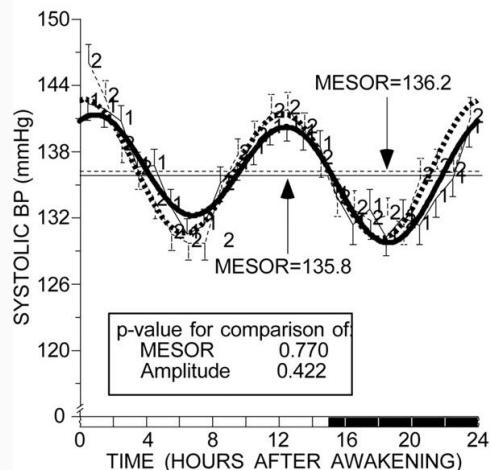
PAD



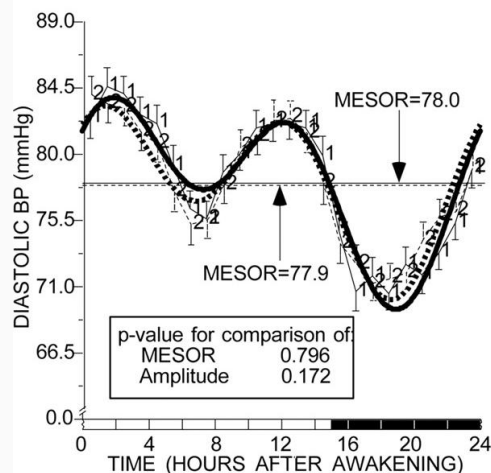
Cronoterapia da Hipertensão

Antes e após 3 meses de tratamento com 3 fármacos de manhã

PAS

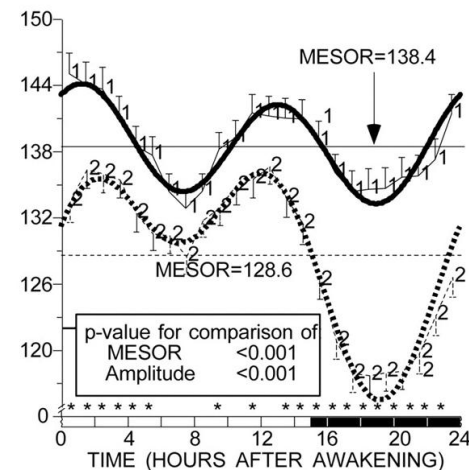


PAD

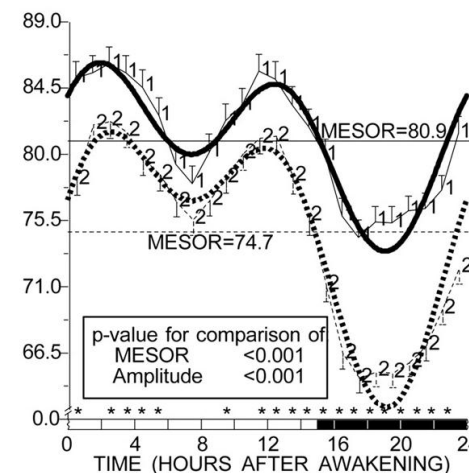


Antes e após 3 meses de tratamento com 2 fármacos de manhã e 1 ao deitar

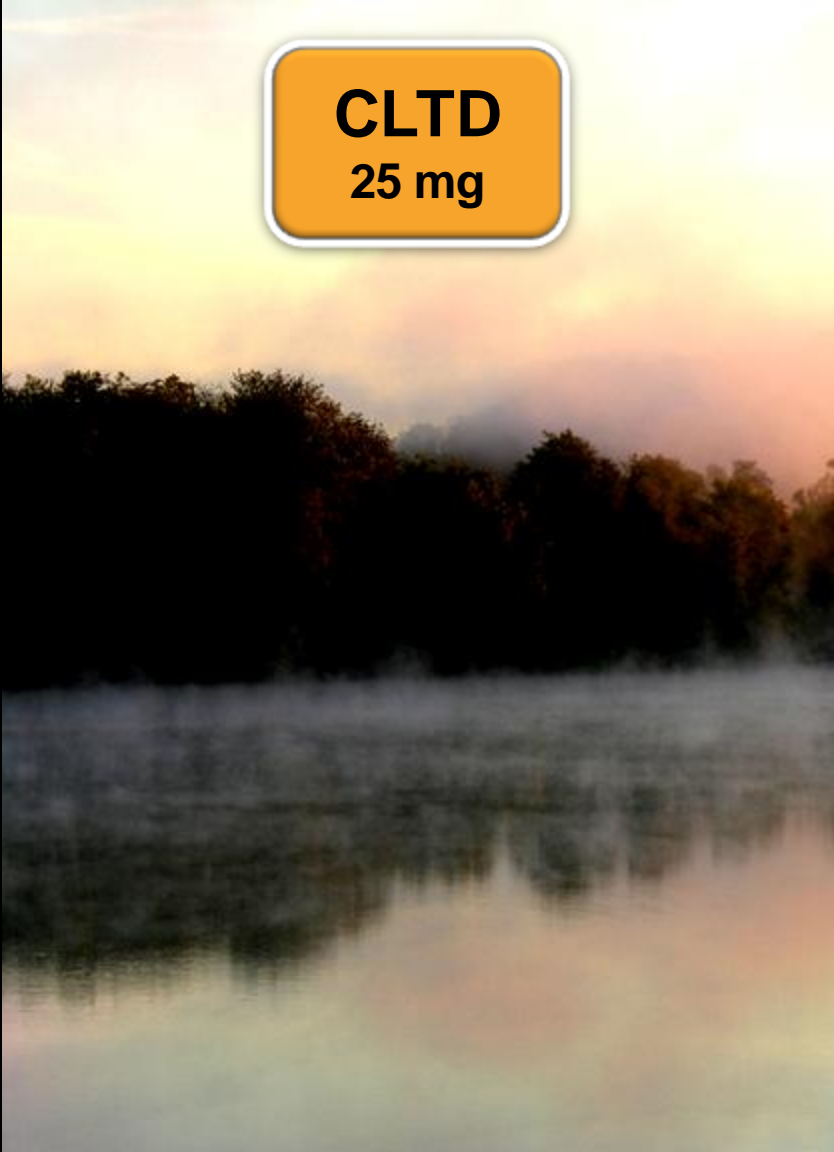
PAS



PAD



Cronoterapia da Hipertensão



CLTD
25 mg



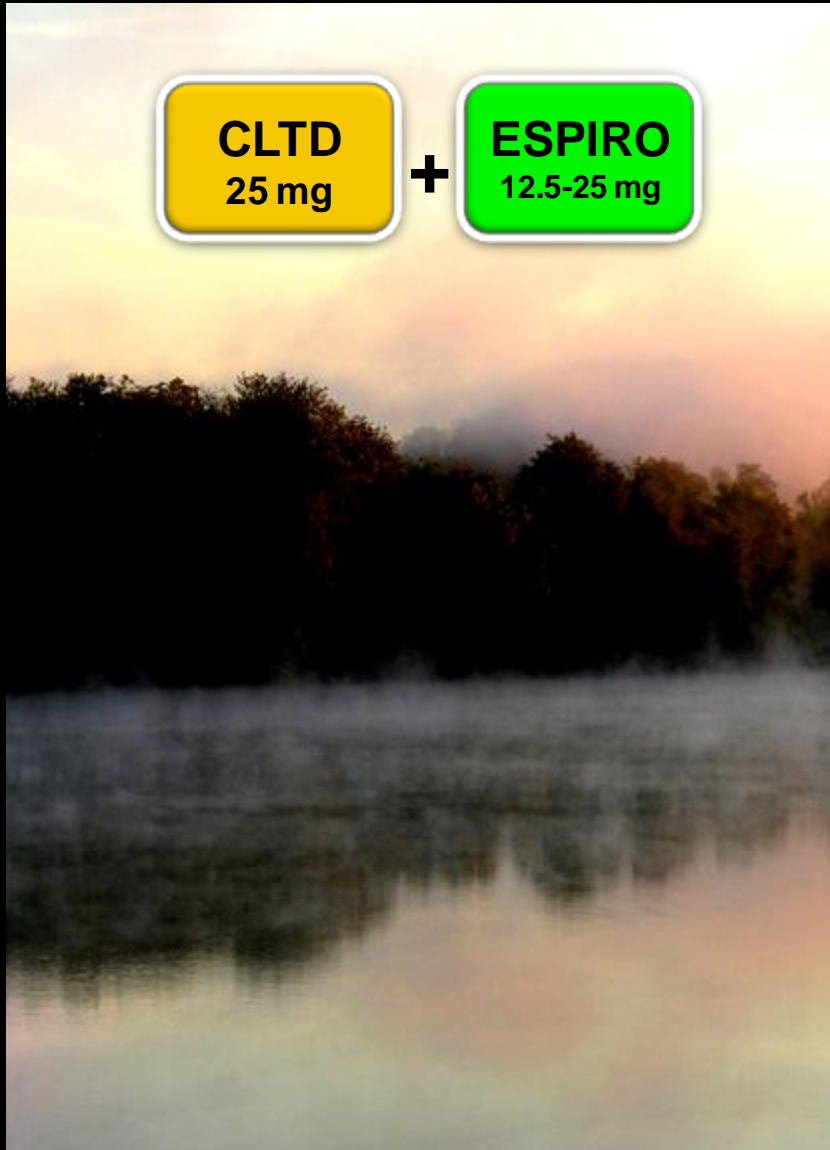
BERA

DHP

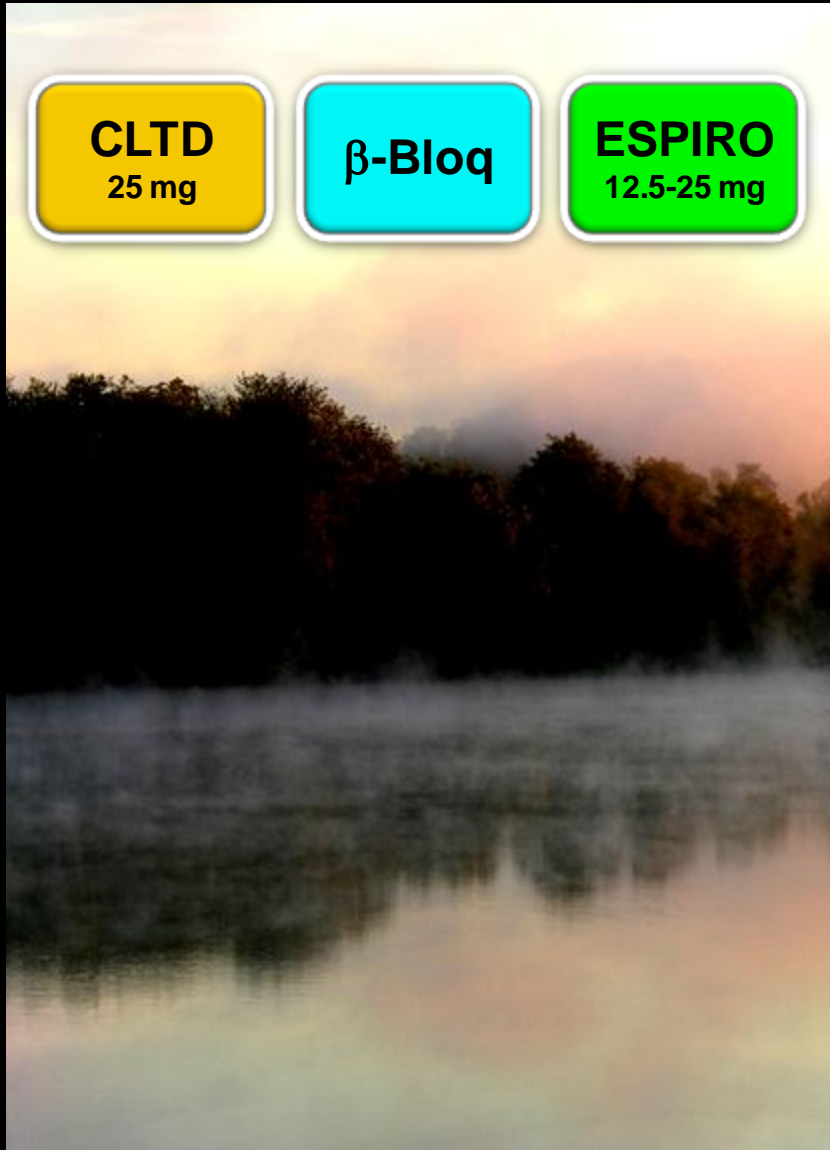
Cronoterapia da Hipertensão



Cronoterapia da Hipertensão



Cronoterapia da Hipertensão



Efficacy of Low-Dose Spironolactone in Subjects With Resistant Hypertension

Mari Konishi Nishizaka, Mohammad Amin Zaman, and David A. Calhoun

Background: Previous reports have demonstrated the antihypertensive efficacy of high doses of spironolactone in subjects with primary aldosteronism and, to a lesser degree, subjects with resistant hypertension.

Methods: In current analysis, we examined the antihypertensive benefit of adding low-dose spironolactone to multidrug regimens that included a diuretic and an angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) in subjects with resistant hypertension with and without primary aldosteronism. Subjects referred for resistant hypertension were evaluated with an early morning plasma renin activity, 24-h urinary aldosterone and sodium during a high dietary salt ingestion. The diagnosis of primary aldosteronism was confirmed with a renin activity <1.0 ng/mL/h, urinary aldosterone >12 μ g/24 h and urinary sodium >200 mEq/24 h. After biochemical evaluation, spironolactone (12.5 to 25 mg/d) was added to each subject's antihypertensive regimen. If blood pressure (BP) remained uncontrolled, the dose of spirono-

lactone was titrated up to 50 mg/d. Follow-up BP was determined at 6 weeks, 3 months, and 6 months.

Results: A total number of 76 subjects were included in the analysis, 34 of whom had biochemical primary aldosteronism. Low-dose spironolactone was associated with an additional mean decrease in BP of $21 \pm 21/10 \pm 14$ mm Hg at 6 weeks and $25 \pm 20/12 \pm 12$ mm Hg at 6-month follow-up. The BP reduction was similar in subjects with and without primary aldosteronism and was additive to the use of ACE inhibitors, ARBs, and diuretics.

Conclusions: We conclude that low-dose spironolactone provides significant additive BP reduction in African American and white subjects with resistant hypertension with and without primary aldosteronism. Am J Hypertens 2003;16:925-930 © 2003 American Journal of Hypertension, Ltd.

Key Words: Resistant hypertension, spironolactone, aldosterone, renin, ethnicity.

Redução da PA sistólica e diastólica em indivíduos com HTA Resistente com a associação de espironolactona em baixa dosagem

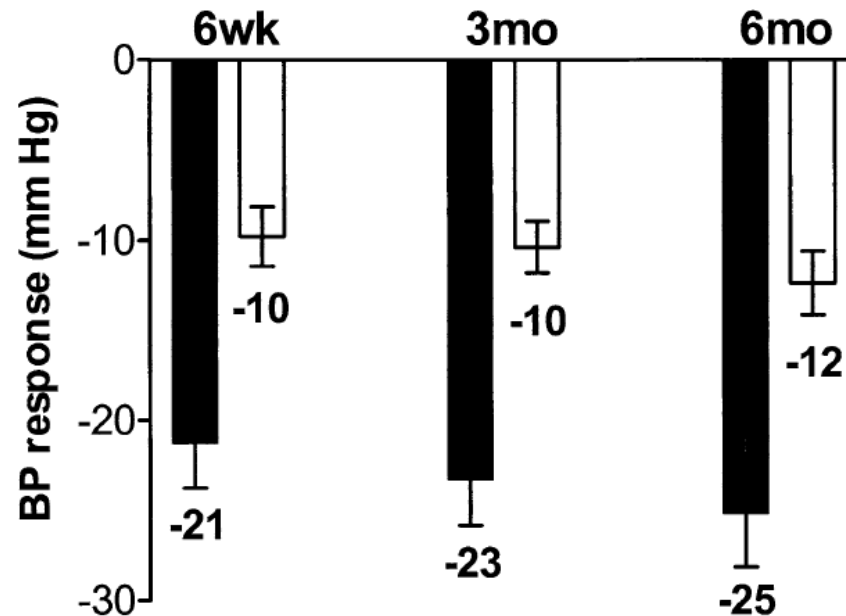


FIG. 1. Spironolactone-induced reduction in systolic blood pressure (BP) (**filled bars**) and diastolic BP (**open bars**) at 6 weeks, 3 months, and 6 months follow-up in subjects with resistant hypertension ($n = 76$). BP reduction was significant at all time points compared to baseline.