

RISK-BASED APPROACH TO THE HYPERTENSIVE PATIENT CLINICAL EVALUATION

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BACKGROUND

HTN: 4th. LARGEST MORTALITY RISK FACTOR WORLD-WIDE.
[6% OF ALL DEATHS].

MILD HTN: LARGEST PROPORTION OF HTN-RELATED CV DEATH
IN US.

[Julius. Am.J.Hyperten.10:300s, 1997].

CVD RISK FACTORS CLUSTER WITH HTN:

INSULIN RESISTANCE.
LIPID ABNORMALITY.
RENAL DYSFUNCTION.
OBESITY.
COAGULATION ABNORMALITY.
LV & VASC. SMOOTH MUSCLE ABNORMALITY.

[Neutel et al. Am.J.Hyperten. 12:215s, 1999].

AIM OF CLINICAL EVALUATION

DX OF HYPERTENSION.
TARGET ORGAN DAMAGE.
CV RISK STRATIFICATION.
CURABLE CAUSES.

Diagnostic work-up

No universal scheme

Extent of investigation depends on:

Background, gender, family history and age

Severity of hypertension

Likelihood of target organ damage

Likelihood of secondary hypertension

Cost, time, and risk of diagnostic workup

History: Personal profile

Duration of high BP.

Maximal, minimal & average BP \pm drugs.

Validation of BP readings: by whom? Machine?

One or both arms? Body position?

Dark races: early & severe TO damage.

+ve. FH favors essential HTN.

Smoking: risk profile.

Alcohol: HTN.

Diet salt habits

History: Risk profile

Diabetes:

Earlier & more severe complications of both.

More strict BP control target.

Symptoms suggesting target organ involvement:

Cardiac: dyspnea, chest pain, skipping palpitation

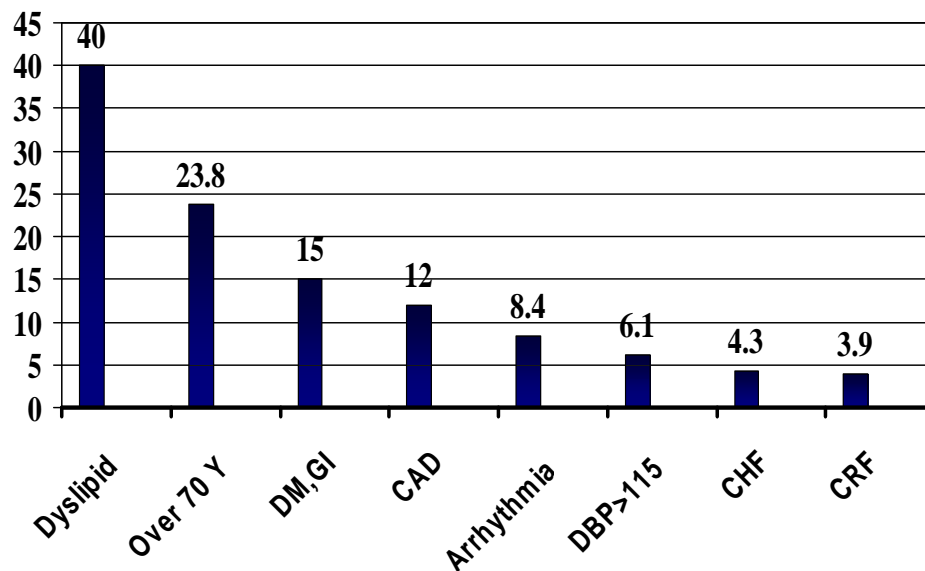
Cerebral: stroke, transient deficits, dementia

Peripheral: claudication

Renal: usually silent till ESRD.

Recent resistance to treatment.

High-risk associations with HTN (Luccioni study)



Headache, flushing, red eyes and epistaxis [so-called symptoms of hypertension]

Poor indicators of presence or severity of HTN.

Morning occipital, bitemporal or migraine-type headache do not tell normo- from hypertensives.

Apart from hypertensive encephalopathy; headache is of no diagnostic value.

Flushing, conjunctival injection, and epistaxis are equally poor indicators.

Dependence of the patient on symptoms to take treatment leads to serious under-treatment.

The history: Drugs

Antihypertensive: type, dose, duration, compliance, adverse effects. If stopped, why?

Drugs to cause or exacerbate hypertension:

- NSAIDs
- Contraceptive pills
- Steroids
- Anti-asthmatic drugs
- Cold and flu medicines
- MAO inhibitors.

The history: co-morbid conditions

- Asthma
- Drug allergy.
- Hyperuricemia & gout.
- Prostatic symptoms
- Sexual dysfunction.
- Depression.
- Cerebrovascular insufficiency
- Coronary artery disease
- Peripheral vascular disease.
- Postural hypotension
- Prostate-induced symptoms

The ten handicaps of the elderly patient

- Living alone
- Low fixed income
- Depression
- Poor memory
- Poor eye sight
- Malnutrition
- Limited mobility
- Arthritic hands
- Multi-morbidity, poly-pharmacy
- Tendency to postural hypotension, falls

History to suggest diagnostic work-up for secondary hypertension

Hx. of renal dis. [glomerulonephritis, UTIs, Bilh, stone, renal colics, prostatic symptoms]

Abnormal urine tests [hematuria, albuminuria, pyuria, Bilharziasis].

Secondary drug resistance

Onset <20 or >50 Y. esp. with -ve FH of HTN.

Paroxysmal HTN: esp. with palpitation, headache, postural hypotension.

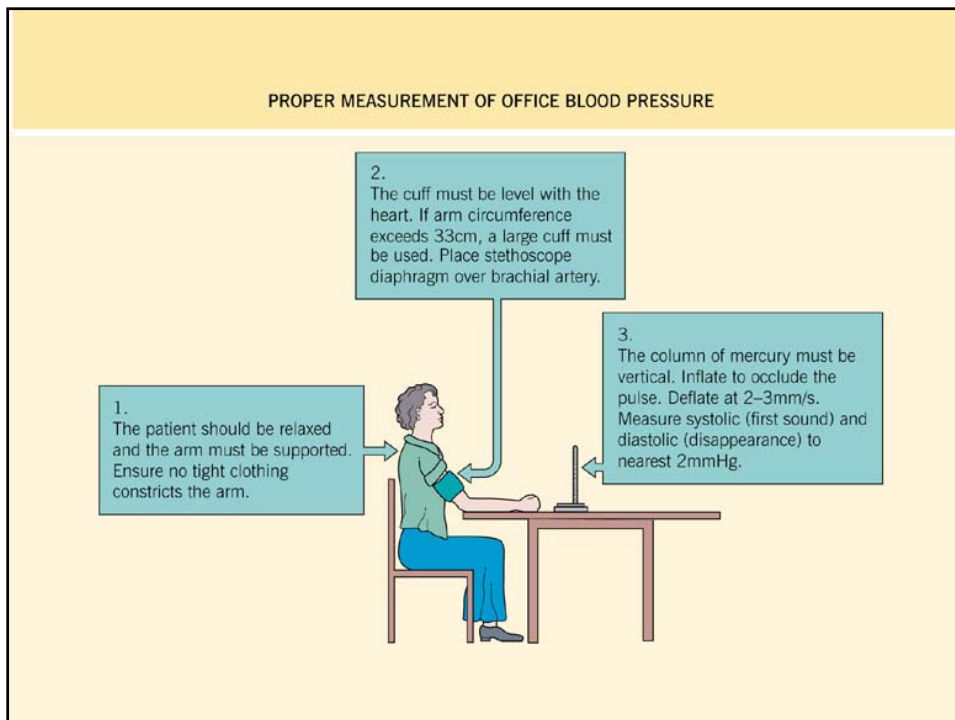
Physical examination

Technique of BP measurement.

Most mild-moderate HTN: NAD.

Weight, height, BMI, waist/hip ratio.

Most commonly missed: fundus exam.



Significant physical findings-1

Head & neck:

- Fundoscopy changes
- Carotid murmurs
- Thyroid swelling, bruit
- Juvenile corneal arcus, xanthelasma
- Pallor & puffiness: renal disease
- Stigmata of endocrine disease

Cardiac:

- LVH, S4, S3, Cardiomegaly, MR
- Loud A2, early diastolic murmur
- Cardiac arrhythmia

Significant physical findings-2

Chest:

- Asthma, wheeze

Neurologic examination:

- Alertness, muscle power, transient deficits, dementia

Abdomen:

- Bruits
- Masses
- AAA

Lower limbs:

- Weak delayed femoral pulse
- Vascular bruit, degenerative changes
- Ankle-brachial index

Diagnosis of hypertension: Summary

