NOVEL NON-DRUG ADJUNCT THERAPY FOR HYPERTENSION

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• Dr Ajay Kumar Singh Parihar
• Dr Shruti Chauhan
Hypertension

- Commonest cardiovascular disorder

- Major risk factors for cardiovascular mortality (20 to 50% of all deaths)
Hypertension & the rule of halves

- Only about half of all the hypertensive patients are aware of their problem.
- Only half of all those aware are getting treatment.
- Only half of all those being treated are being adequately treated.
PRIMARY (or ESSENTIAL) HYPERTENSION

• accounts for nearly 90% of all cases

• management is well established

• comparatively easy if we keep following the established & well tested cascade

• and if it is not complicated
Alone, I am unable to go any further within my own resources and pension.

I can’t really explain, but can make a guess.

Actually need help from all of you, from the IMA & our government, NGOs, world health bodies, etc.
We have named this technique as "KALHORE TECHNIQUE"

(After the name of my grandparents village in MAINPURI, Uttar Pradesh)
The background,
& how it all started off ......
They say ......

..... necessity is the mother of invention
1985.....after AFMC, enroute to CHINA border at 16000 feet & my friend bidding me a farewell
God was too kind ........
kept giving me opportunities at borders to
deal with unmet needs & scarcity
It is all OK if

- there is availability of needed medicines
- a patient is regular with his medicines

BUT what if the reverse happens ?????
In my 25 years of Army service, at times there came certain situations that compelled me to look for alternatives.
- Undiagnosed cases of hypertension
- Non-availability of medicines
- Unable to send these patients to nearest hospital for better management
- Frequently defaulting in taking medicines
- Rare and infrequent tendency of some individuals of ignoring, or masking their problem
What we know already .....
Risk factors

(a) Non-modifiable risk factors

- ↑ age (> 60 years in USA, prevalence is 65.4%)
- Sex = ↑ in males. Equal after post menopause
- Genetic factors: Twin studies / monozygotic
- Family: No family history = 4%
  + Family history = 45%
- Ethnicity: Black Africans > Hispanics > Whites
b) **Modifiable risk factors**

- Obesity
- Salt intake
- Saturated fat
- Dietary fibre
- Alcohol
- Heart rate
- Physical activity
- Environment stress
- Socioeconomic status
- Other factors: Oral contraception, noise, etc
The new concepts that we have added ........
(A) CIRCUMSTANTIAL HYPERTENSION

- Anger
- Frustration
- Denial
- Extreme degree of physical & / or mental challenge
- Difficult & persisting family issues, etc

JABFM: [http://jabfm.org/content/17/3/184/reply](http://jabfm.org/content/17/3/184/reply)
CMAJ: [http://www.cmaj.ca/content/174/12/1737.abstract/reply#cmajel_4577](http://www.cmaj.ca/content/174/12/1737.abstract/reply#cmajel_4577)
(B) High doses of ELTROXIN

• Is the pulse too rapid?
• Does it remain so even at rest and during sleep?
• Any other features of excess?

(C) Need to cut down extra iodine in salt

Our views are with the BMJ’s domain since **22 May 2013**

http://www.bmj.com/content/344/bmj.d7541/rr/646735
(4) ‘Hyponatremic Hypertensive Syndrome’
&
Renal artery stenosis

Canadian Medical Association Journal (CMAJ)
(http://www.cmaj.ca/content/186/8/E281/reply)
(5) Pseudo-hypertension in an elderly

- Very high blood pressure with no significant target organ impairment

- Treatment efforts may result in adverse effects and such symptoms like dizziness, confusion, and decreased urine output, etc.

- A simple bedside procedure which goes by the name of 'Osler's maneuver' can confirm pseudo-hypertension
  - if the radial artery can still be palpated despite the blood pressure cuff being inflated over the arm, it denotes a **+ve Osler's sign** (a pointer towards pseudo-hypertension).

(our eletter to BMJ: http://www.bmj.com/content/344/bmj.d7541/rr/638487)
The ideas came to me in bits and pieces

...... as a jig-saw puzzle
And all that has taught us that:

- No two individuals are alike

- Patients will always be doing better with a tailored approach that is suited for them
Certain essentials of our technique, and where we possibly differ

1. Consider ‘CIRCUMSTANTIAL HYPERTENSION’, & if suspected, its appropriate remediation*
   * Appropriate counseling & follow up (Family / society / workplace interactions)

2. Review the necessity of iodine supplementation in dietary salt (our eletter to the BMJ)

3. Review the necessity of high doses of ELTROXIN

4. Rule out PSEUDO-HYPERTENSION in the elderly (CMAJ)
AIMED SHOT at ESSENTIAL HYPERTENSION
Let’s go over a few facts that we all do know ........
Hypertension

Primary or Essential Hypertension

No identifiable causes

Secondary Hypertension

BP is elevated by identifiable cause(s)

5 to 10%
Blood Pressure = Cardiac output (CO) \times \text{Peripheral resistance}

Cardiac factors
- Heart rate
- Contractility

Blood volume
- Sodium
- Atrial natriuretic peptide
- Mineralocorticoids

Neural factors
- Constrictors = Alfa adrenergic
- Dilators = Beta adrenergic

Humoral & local factors
Humoral factors

Constrictors
- Angiotensin II
- Catecholamines
- Thromboxane
- Leukotrienes
- Endothelin

Dilators
- Prostaglandins
- Kinins
- Nitric Oxide (NO)

Local factors
- Autoregulation (↑ed blood flow induces vasoconstriction)
- pH
- hypoxia
Our thinking ........
The separation line between Primary and Secondary Hypertension (Threshold)

SECONDARY HYPERTENSION

"Capping" (by stress / Circumstances)

Underlying "core" causes

Iceberg
(with the tip still below the threshold, so as to remain undetected)

PRIMARY HYPERTENSION
Primary or Essential Hypertension

- Stress & / or Circumstantial Hypertension
- Increased Sympathetic Tone
- Renovascular Causes: Cause Not Identified
Sympathetic activation is common in patients with essential hypertension and contributes to initiation, maintenance and progression of the disease and it contributes to the manifestation of its major complications. A considerable body of evidence relates SNS overactivity with high sodium intake in experimental animals and humans and the underlying mechanisms have nowadays been elucidated. SNS activity is more pronounced in patients with resistant hypertension and there are several conditions that lead to this phenomenon, as older age, kidney disease, obesity and metabolic syndrome, mental stress and sleep apnea. SNS overactivity holds also a key physiopathological role in heart failure, acute coronary syndromes and arrhythmias. Moreover, inhibition of sympathetic overactivity by various means, including central SNS suppressing drugs, peripheral alpha- and beta- adrenergic receptor blockers, or novel approaches as renal sympathetic denervation have been used successfully in the treatment of all these disorders.

Two important factors that might be overlooked:

✓ Overactivity of the sympathetic nervous system

✓ Slightly compromised renal afferant supply
Long list of causes of SECONDARY HYPERTENSION

"KALHORE TECHNIQUE"

we consider just a few causes that we can attempt to modify to certain extent

Renal artery stenosis

Stretching of right atrium also stretches sinus node

This ↑ HR by 10 to 15%

We try to minimize the stretch

downward sympathetic tone
Essential (or Primary) Hypertension

- Circumstantial Hypertension
- Any of the causes for secondary hypertension at a subthreshold level
- Excess of iodine supplementation
- Some very rare syndromes that might not be easily identified, e.g., Hyponatremic hypertensive syndrome
Pseudo – hypertension (in the elderly)

- Arteriosclerosis can result in pseudo-hypertension.
- Both the systolic and diastolic pressures are affected.
- Osler's maneuver can be suggestive.
- Need to be a bit more cautious to prevent unnecessary treatment.
Empty mind is devil’s workshop

It was never my intention to conduct any study

As usual, I was the first patient; then my wife, followed by some of the other family members

Couldn’t refuse close friends and relatives; once they learnt the results from those who had been benefited
N = 39 cases

Minimum duration of anti-hypertensive medicines = FIVE YEARS

Number of anti-hypertensives

- Single anti-hypertensive drug = 05
- Two drug combination = 27
- Three drugs = 07

Totally off anti hypertensive medicines = 11

Reduced dosage & better control = 28
• Have to keep reviewing & possibly keep repeating the technique

• Two patients have been restarted on anti-hypertensive medication (although at a much lower dose)
Our technique is a combination of:

(a) Exclusion of underlying cardiac beriberi (thiamine deficiency) & empirical treatment if suspected

(b) Use of bio-physical modality like therapeutic acoustic waves generated by piezo-electric crystals
KALHORE TECHNIQUE

• Results are apparent within a day or two
• Take about one week for the results to settle down
• Require three to five sittings; sometimes more
• No preparations required
• Totally painless and non-invasive technique
What needs to be done now:

- To grade and calibrate the response
- To refine this technique & add finesse
- To make it free of any complications
- To make it viable and acceptable
- To make the results more predictable & lasting
- To simplify this technique and make it totally safe
Benefits of our “KALHORE TECHNIQUE”

• Can normalize the elevated blood pressures; doing away the need of continuous treatment

• Can help reduce the dose of anti-hypertensive medicines being used

• Can help those individuals who are not punctual or regular with treatment

• Regular check is essential, and a fall back on medicines, or increase in doses may be required
From systolic 202 to 155
The enlarged heart while the Blood Pressure was 220 mm Hg systolic in a 46 year old male athlete.

The same heart when the Blood Pressure was controlled. This repeat X-ray is after ONE WEEK of changing the medicines.
Results of a patient who has had three strokes, was hemiplegic, with facial palsy, and has been having uncontrolled hypertension, despite being on anti-hypertensives,

- Hemiplegia nearly gone
- Facial palsy nearly gone
- BP controlled
With needful and full help & a bit of encouragement from our Government, NGOs, & from IMA, we can possibly re-write the story of Essential Hypertension.
Management of "Essential Hypertension"

Kalhore Technique

Our new technique for BP control

All around the world BP control

This way

Some degree of overlap in management

More research for precision & perfection needed
Perhaps in the absence of better alternatives, we continue to follow several dated management techniques for some of the most prevalent chronic conditions. This book reveals a dozen and more novel, simple, and unique therapeutic techniques that were unknown to the world until they were revealed at some of the best international medical conferences. For example how about a non-surgical, non-invasive, and painless technique for restoring back natural hearing, thereby overcoming the need of a hearing aid? Management of conditions like BPH, chronic arthritis, lumbar canal stenosis, sleep apnea, gynaecomastia, deviated nasal septum, cosmetic correction of nose, rejuvenation of face and neck, long term management of migraine, removal of fat and cellulite, etc, can become quite simple and effective. Continued use of medicines or requirement of surgery can be curtailed for many of the chronic illnesses by the innovative techniques that are deliberated in this book. All alone, and without any help or encouragement whatsoever, the authors are unable to do anything anymore. Surely much more research is required, which can be taken up by the world’s medical and scientific community.

Hon’ National Professor Dr. Rajesh Chauhan has many first diagnoses in the world & all these innovative techniques to his credit. Biographical publishers rank him amongst the very top. He has long experience with Indian & Botswana Army, before voluntary retirement in 2008. Now besides consultations, he also reviews some top medical journals.

Innovative Medical Techniques Showcased at International Conferences

Rajesh Chauhan
Shruti Chauhan
Ajay Kumar Singh Parihar
and I have been presenting my techniques at some top medical conferences
With our new techniques, most of these surgeries will no more be essential.

In the coming years, surgery may not be so essential for managing following conditions:

1. DNS
2. ‘Nose job’
3. Face lift, neck lift
4. Removing flab & cellulite
5. BPH (benign prostatic hyperplasia)
6. Chronic arthritis of knees
7. Frozen shoulder
8. Plantar fasciitis
9. Macroglossia
10. Lumbar canal stenosis
11. Gynaecomastia
12. Hypertrophied nasal turbinates

Medicine: Perhaps its time to look beyond the tunnels and to remove constraining straight-jackets.

Published in BMJ (as eletter) http://www.bmj.com/content/349/bmj.g6123/rr/788689
We have this doctor’s permission to present his case at this conference and anywhere else.

Blood Pressure
WITHOUT any further need of anti-hypertensive medicines

100% SPO2 at rest

Pulse at 82 (from an earlier pulse rate that was Over 100
Patient Information:

- **Name:** [Redacted]
- **Age:** 54 yr/m
- **Sex:** M
- **Height:** [Redacted]
- **Weight:** [Redacted]
- **BSA:** [Redacted]

**EchoCardiography**

**Exam Date:** 28 Apr 2015

**Measurements:**

- **LVSD:** 1.00 cm
- **IVS:** 0.62 mm
- **LVMA:** 0.87 cm
- **AoRoD:** 0.52 cm
- **LVH:** 0.90 cm
- **AoT:** 0.37 cm
- **Aortic Valve:** [Redacted]
- **Mitral Valve:** [Redacted]
- **Tricuspid Valve:** [Redacted]
- **Pulmonary Valve:** [Redacted]

**Global Hypokinesis:**

- **LV:** 30-35%

**With:** Upper Normal LV...

**LV MIP:** LV Diastolic Dysfunction Seen

**Impression:** CAD, TVD, Post CABG, Poor LV EF 30-35%

**Date:** 26/4/2015

Signature:
**Discharge Summary**

**Patient Name:** Dr. [Name]
**Age:** 53
**Patient UHID:** MM00433403
**Gender:** Male

**Admission Date:** 24/09/2013 14:09
**Location:** East-8th Floor NU 1

**Encounter Type:** Inpatient
**Encounter ID:** 114380S5
**Consultant Incharge:** Dr. [Name]

**Date Of Discharge:** 04/10/2013 02:15
**Name of Consultant:** DR. [Name]
**Bed No.:** 4862

**Reason for admissions:** Procedure/Surgery

**Diagnosis & Co-morbidities:**
- HYPERTENSION
- TYPE II DIABETES MELLITUS
- POST INFERIOR WALL MI
- CORONARY ARTERY DISEASE
- TRIPLE VESSEL DISEASE

**Allergies:** Not known.

**Procedure or Surgery:** OPCABG X5, LIMA to LAD, RADIAL TO OM1 & OM2, SVG TO DIAGONAL & PDA WAS DONE ON 27/09/2013.

**Medical History & Presenting Complaints:**

Dr. [Name] is a 53-year-old hypertensive and diabetic male patient, is a known case of post anterior wall MI, coronary artery disease and triple vessel disease. The patient presented here with complaints of chest pain on and off since 10 days radiating to left hand and is associated with palpitations and sweating. The patient was further investigated and found to have CAD. Now, patient was admitted here for further evaluation & management.

**Physical & Systemic Examination:**

On admission patients pulse was 68/Min, BP was 110/70 mmHg.

**Investigations & Laboratory:**


- Peripheral Doppler (25/09/2013): Normal peripheral arterial Doppler study.

- REVIEW ECHO (03/10/2013): Akkinetic posterior wall, mid basal lateral wall & basal inferior wall, LVEF 45%. Mild concenctric LVH, normal other CCB. MIP-Doppler, normal LVEDP.

- ECHO (03/10/2013): Mild mitral, no DCM, MVP.
**Echocardiographic Findings**

### Wall Motion Analysis

<table>
<thead>
<tr>
<th>Segment</th>
<th>Rest</th>
<th>Immediate Post Exercise</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basal ant septum</td>
<td>Normal</td>
<td>Hyperkinetic</td>
<td>Normal</td>
</tr>
<tr>
<td>Mid ant septum</td>
<td>Normal</td>
<td>Hyperkinetic</td>
<td>Normal</td>
</tr>
<tr>
<td>Diastal posterior</td>
<td>Normal</td>
<td>Hyperkinetic</td>
<td>Normal</td>
</tr>
<tr>
<td>Mid posterior</td>
<td>Akinetic</td>
<td>Akinetic</td>
<td>Scar</td>
</tr>
</tbody>
</table>

### PLAX

- **Segment**: Basal ant septum, Mid ant septum, Diastal posterior, Mid posterior, Apical 4-chamber, Basal Septum, Mid Septum, Apical Septum, Basal Lateral, Mid Lateral, Apical Lateral
- **Rest**: Normal, Akinetic, Hypokinetic
- **Immediate Post Exercise**: Hyperkinetic, Normal, Scar
- **Interpretation**: Normal, Hyperkinetic, Scar

### Summary & Interpretation

1. **Normal exercise capacity.**
2. No chest pain or ECG changes during the stress test.
3. Normal heart rate and blood pressure response.
4. Akinetic mid basal inferior, mid posterior, mid basal lateral hypokinetic distal IVS. No inducible wall motion abnormality.

**Final Impression**
- Stress echocardiography is negative for inducible myocardial ischemia.

- Dr. Jitendra Jodha, MD, DNB (Cardio), DNB (Intensive Care)
- Consultant Cardiologist
- mediation by Dr. Jitendra Jodha on 10 Mar 2015, 02:06 PM | Released on 10 Mar 2015, 01:49 PM

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**Other Findings**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Rest</th>
<th>Immediate Post Exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td>LV ejection fraction (%)</td>
<td>35</td>
<td>42</td>
</tr>
<tr>
<td>Mitral inflow E/A velocities (cm/sec)</td>
<td>100/80</td>
<td>100/90</td>
</tr>
<tr>
<td>Mitral annulus E velocities (cm/sec)</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Mitral Regurgitation</td>
<td>Trace MR</td>
<td>Trace MR</td>
</tr>
<tr>
<td>Estimated LVEDP (mmHg)</td>
<td>Increased</td>
<td>Increased</td>
</tr>
<tr>
<td>Estimated PASP (mmHg)</td>
<td>Trace TR, PASP = Normal</td>
<td>Trace TR, PASP = Normal</td>
</tr>
</tbody>
</table>

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24x7 Hotline: +91 (124) 4144144
Emergency: 01241088
Email: info@medanta.org
www.medanta.org

Medanta, The Medicity, Sector 28, Gurgaon, Haryana, 122001, India
Medanta, The Medicity, E-18 Defence Colony, New Delhi 110024

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Medanta, The Medicity, Sector 28, Gurgaon, Haryana, 122001, India
Medanta, The Medicity, E-18 Defence Colony, New Delhi 110024
Exercise Stress Echo

Exercise stress echo is used to visualize and assess the response of the heart to external stress, especially to determine any abnormal blood flow to the heart.

Indication: PCI/ACABG

Procedure details

Max. Predicted Heart Rate (MPHR): 166
85% of MPHR (Target HR): 141
Protocol: Bruce
Duration: 8.18
METs achieved: 10.10
End point: THR achieved
Heart Rate Achieved: 151
% of MPHR: 90

Clinical Findings

<table>
<thead>
<tr>
<th>Stage</th>
<th>Time (mins)</th>
<th>Heart Rate (bpm)</th>
<th>BP (mmHg)</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supine</td>
<td>0</td>
<td>85</td>
<td>130/70</td>
<td>Nil</td>
</tr>
<tr>
<td>Stage I</td>
<td>3</td>
<td>107</td>
<td>140/70</td>
<td>Nil</td>
</tr>
<tr>
<td>Stage II</td>
<td>3</td>
<td>121</td>
<td>150/70</td>
<td>Nil</td>
</tr>
<tr>
<td>Stage III</td>
<td>2.18</td>
<td>151</td>
<td>160/70</td>
<td>Nil</td>
</tr>
</tbody>
</table>

ECG Findings

Baseline ECG: T Inversion in II, III aVF and V3-6

ECG abnormalities during the exercise and recovery phases

<table>
<thead>
<tr>
<th>Stage</th>
<th>ST-T Changes</th>
<th>Arrhythmia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supine</td>
<td>No significant ST-T changes</td>
<td>Nil</td>
</tr>
<tr>
<td>Stage I</td>
<td>No significant ST-T changes</td>
<td>Nil</td>
</tr>
<tr>
<td>Stage II</td>
<td>No significant ST-T changes</td>
<td>Nil</td>
</tr>
<tr>
<td>Stage III</td>
<td>No significant ST-T changes</td>
<td>Nil</td>
</tr>
<tr>
<td>Recovery</td>
<td>No significant ST-T changes</td>
<td>Nil</td>
</tr>
</tbody>
</table>

Measurements

<table>
<thead>
<tr>
<th>Value</th>
<th>LA</th>
<th>RV</th>
<th>LV</th>
<th>MV</th>
<th>AV</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA = 1.73 cm</td>
<td>RV = 2.01 cm</td>
<td>LV = 5.64 cm</td>
<td>MV = 1.78 cm</td>
<td>AV = 2.78 cm</td>
<td></td>
</tr>
<tr>
<td>RV = 2.01 cm</td>
<td>LV = 5.64 cm</td>
<td>MV = 1.78 cm</td>
<td>AV = 2.78 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LV = 5.64 cm</td>
<td>MV = 1.78 cm</td>
<td>AV = 2.78 cm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MV = 1.78 cm</td>
<td>AV = 2.78 cm</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Pulmonary Valve

PV = 3.01 mmHg

Aortic Valve

AV = 2.78 mmHg

Tricuspid Valve

PV = 3.01 mmHg

Mitral Valve

MV = 1.78 mmHg

Truncus Valve

PV = 3.01 mmHg

Comments

HOCM, HTN, OBESITY, DM
LV DYSFUNCTION WITH TRACE MR, TR
LV IMPRESSION - HTN, DM, OBESITY, LV DYSFUNCTION

Date: 11/5/2015

Signature:
अकेले तो हम अब तक सब करते ही रहे,
गर समाज का, डॉक्टर्स का, चौथे स्तम्भ का,
और सरकार का साथ आज भी मिल जाए,
तो अपने देश और पूरे सन्सार में एक
क्रान्ति भी लाई जा सकती है कई एक इलाजों में।
Thank You

JAI HIND