HORMONES & PAIN CARE

Presented at the Annual Meeting of the American Academy of Pain Management, 2015

By

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Hormone testing and treatment have permanently entered chronic pain care.

Tennant F. Hosp Pract 42(5); 2014.
HORMONE NECESSITY

• REDUCE PAIN AND ITS COMORBIDITIES (e.g. fatigue, depression, memory loss)

• PERMANENT NEUROGENIC HEALING

• POTENTIATION AND STABILIZATION OF ANALGESICS (e.g. opioid reduction)

• BIOMARKER OF PAIN SEVERITY, TREATMENT PROGRESS, AND HORMONAL COMPLICATIONS
HORMONES & PAIN CARE

IS NOT
✓ Endocrinology
✓ Anti-aging
✓ Fertility
✓ Cancer Treatment
✓ Total Replacement

IS
✓ Sub-replacement
✓ Targeted therapeutics of specific hormones
ENABLING FACTORS

• HORMONE PROFILES
• COMPOUNDING PHARMACIES
• NORMAL BIOLOGIC RANGES
• HEALTH FOOD STORES/INTERNET
HORMONES CRITICAL FOR PAIN CARE

- ESTROGEN
- CORTISOL
- PREGNENOLONE
- HCG
- OXYTOCIN
- THYROID
- PROGESTERONE
- DHEA
- TESTOSTERONE
NEUROHORMONES

FUNCTIONS: NEUROPROTECTION, NEUROGENESIS

PROGESTERONE  PREGNENOLONE

OXYTOCIN  ESTROGEN

HCG  DHEA
HOW PAIN STIMULATES HORMONES
TWO PHASES OF UNCONTROLLED PAIN
Uncontrolled pain can deplete pituitary, adrenal, and gonadal hormones.
ADRENOCORTICOTROPIN
(ACTH)
CRITICAL BIOMARKER IN PAIN CARE
ACTH

HIGH LEVEL — NEED MORE ANALGESIA

LOW LEVEL — NEED MORE ANALGESIA and/or

TOO MUCH OPIOID EFFECT
WHO SHOULD BE TESTED?

CHRONIC PAIN PATIENT WHO HAS CENTRALIZED PAIN
CLINICAL DIAGNOSIS OF CENTRALIZED PAIN

HALLMARKS

✓ Chronic Pain Initiator
  • Peripheral
  • Central

✓ Constant Pain

✓ Fatigue

✓ Insomnia

✓ Excess Sympathetic Discharge
  • BP, Pulse
  • Vasoconstriction
  • Hyperhidrosis
  • Hyperreflexia
SPECIAL SITUATIONS IN ON-GOING PATIENT

• REGIMEN QUILTS WORKING

• HYPERALGESIA

• EMOTIONAL – CATASTROPHIZING CRISES
SPECIAL SITUATIONS

EXTREMELY LOW LEVELS OF:

✓ CORTISONE – under 1.0 mcg/dl
✓ TESTOSTERONE – under 3.0 ng/ml

REQUIRES IMMEDIATE HORMONE ADMINISTRATION
SUB-REPLACEMENT

• START LOW AND GO SLOW

• KEEP HORMONES IN NORMAL RANGE

• REPEAT TESTS EVERY 4 TO 12 WEEKS
### Starting Dosage

<table>
<thead>
<tr>
<th>HORMONE</th>
<th>DAILY STARTING DOSAGES FOR LOW SERUM LEVELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREGNENOLONE</td>
<td>25 to 50 mg BID</td>
</tr>
<tr>
<td>DHEA</td>
<td>25 to 50 mg BID</td>
</tr>
<tr>
<td>CORTISOL</td>
<td>Hydrocortisone – 2.5 to 5.0 mg BID</td>
</tr>
<tr>
<td></td>
<td>Cortisol–Compounded – 3.0 to 5.0 mg BID</td>
</tr>
<tr>
<td>PROGESTERONE</td>
<td>Progesterone – 100 mg a day</td>
</tr>
<tr>
<td></td>
<td>Medroxyprogesterone – 10 to 20 mg a day</td>
</tr>
<tr>
<td>ESTRADIOL</td>
<td>0.5 to 1.0 mg a day</td>
</tr>
<tr>
<td>TESTOSTERONE - MALES</td>
<td>Commercial topicals, patches, buccal.</td>
</tr>
<tr>
<td></td>
<td>Follow the label</td>
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<tr>
<td></td>
<td>Injectable in Oil – 100 to 200 mg a month</td>
</tr>
<tr>
<td>TESTOSTERONE - FEMALES</td>
<td>20 to 25% of the male dosage</td>
</tr>
</tbody>
</table>

Doses are oral unless otherwise stated.
CLINICAL TRIALS
COMMON IN PRACTICE

• THYROID

• ESTROGEN

• TESTOSTERONE
HIGH POTENCY TOPICALS

ESTRADIOL: 6 mg per oz.

TESTOSTERONE: 10 %

MEDROXYPROGESTERONE: 20-30 mg per oz.
HUMAN CHORIONIC GONADOTROPIN (HCG)
TWO UNITS

• One Consists of FSH, LH, TSH

• One is neurogenic (Grows blood vessels, releases NO)
SPECIAL SITUATIONS FOR HCG

✓ FIBROMYALGIA
✓ ARACHNOIDITIS
✓ SEVERE CENTRALIZED PAIN
✓ OSTEOARTHRITIS
USE OF HCG

• Injectable Preferable Over Sublingual

• Starting Dosages

✓ Sublingual 250 units/ml, ½ to 1 ml 3 times a week

✓ Sub cu injectable 1000 units/ml, ¼ ml 3 times a week
OXYTOCIN

✓ MECHANISM UNKNOWN

✓ NASAL OR SUBLINGUAL

✓ STARTING DOSE

  (40 units per ml, 10 units daily)

✓ SPECIAL SITUATION

  EHLERS-DANLOS SYNDROME?
TRAUMATIC BRAIN INJURY

• MAY HAVE SEVERE PITUITARY-ADRENAL INSUFFICIENCY

• ENDOCRINOLOGY CONSULT WHEN HAVE A LOW LEVEL OF ACTH PLUS TWO OTHERS
DISEASE OF THE SUPRA-RENAL CAPSULES
BY THOMAS ADDISON, M.D.
“BUFFALO HUMP”
CERVICAL HUMPING OF HYPERCORTISOLEMIA
CERVICAL HUMPING OF HYPERCORTISOLEMIA
CENTRALIZED PAIN WITH LOW TESTOSTERONE, HIGH CORTISOL, AND SEVERE OSTEOPOROSIS VERTEBRAL COLLAPSE
References


