Dr. Techy says, Neurogenesis is the future.

**BULLETIN NO. 4**
**AUGUST, 2013**

# HUMAN CHORIONIC GONDOTROPIN AND PREGENOLONE

**This Bulletin begins the publishing of letters and inquiries regarding key hormone and pain care issues.**

**Dear Dr. Tennant,**

I am a Family Medicine physician practicing in a suburb of Chicago. I also specialize in Addiction Medicine and am frequently involved with patients suffering from chronic pain. Recently, I encountered your article in the Journal of Practical Pain Management regarding the use of Human Chorionic Gonadotropin in Pain Treatment. Are you aware of any additional studies or reports regarding the use of HCG in chronic pain? In the article you mention a dosing regimen of 500-1,000 units 1-3 times per week. Typically, how long a period of treatment is recommended before determining if the HCG is effective? Also, is there any evidence that HCG is effective for pain if given sublingually as a liquid or a tablet? I would appreciate your comments regarding the above.

Sincerely,

Anthony T. March D.O.

**Starting dose of sublingual HCG is 125 units twice a day.**

**Dear Dr. March,**

I have used human chorionic gonadotropin (HCG) on two types of patients:

I. Centralized pain patients who have "gone as far" as possible with a standard regimen of anti-depressant, neuropathic, stimulant, and opioid agents;

2. Patients not on opioids but who have mild to moderate arthritis or muscular pains.

Due to cost and the obvious objections of patients to injections, I now primarily use a HCG sublingual preparation of 250 units per ml. The usual starting dose is 125 units twice a day. My maximal dose is 750 units a day. All the compounding pharmacists can now make the preparations. The usual cost for 30 ml (about one month) is around $40 to $60. Third party payors are now starting to cover HCG, since more and more patients and physicians are finding HCG to be a consistently effective, low cost and safe adjunct to other treatments.

I have just done a periodic update on 26 patients with severe centralized, intractable pain who were originally on standard therapy as described above. They have been on HCG for 1 to 6 years. All claim HCG provides energy and endurance. Subgroups report increases in intellectual functions, sleep, and libido. All reported decreases in opioid use range from 30 to 100%. Two patients have stopped opioids. Some type of

pain relief is reported by all patients including some pain free hours, lengthening of time between flares, or reduction of baseline pain.

At this juncture I view HCG as an aid worth trying when your menu of options for a pain patient grows slim. As a closing thought, the basic science studies of HCG involving neurogenesis and hormonal stimulation are compelling.[1,2] One has to look beyond its controversial roles in weight loss and athletic performance to objectively evaluate HCG.

Best wishes always,

Forest

References
1. Lei ZM, Rao CV. Neural actions of luteinizing hormone and human chorionic gonadotropin. Semin Reprod Med 2001;19(1):103-109.
2. Patil AA, Nagari MP. The effect of human chorionic gonadotropin (HCG) on functional recovery of spinal cord sectioned rats. Acta Neruochir 1987;87:76-78.

## Dr. Tennant,

I have been amazed at how many patients in my Pain Management practice have low levels of pregnenolone when measured. Constitutional symptoms including fatigue, insomnia, lowered libido, and depression improve significantly with supplementation. However, although quality of life is improved, I have not seen the decrease in opioid requirements that I expected. And I have a few questions about the management of these patients. What is the optimal interval for injections? When during that interval is the most appropriate time to retest serum pregnenolone, or is there another way to objectively gauge adequate dosing? At what point would you encourage transitioning to sublingual HCG, and how do you determine the sublingual dosage needed based on their response to injections of HCG?

Thank you for championing individual scientific endeavor within the individual practice of medicine via therapeutic trials. Confirmation of medical advances may benefit from double blind placebo controlled trials, but that does not seem to be the way those advances were conceived.

Sincerely,

Charles Walker, MD, DAAPM

**Pregnenolone is usually the first hormone to be suppressed by pain.**

## Dear Dr. Walker,

Your observations with pregnenolone pretty well parallel mine. The high prevalence of severe chronic pain patients who show low serum levels is rather astounding. This is of particular concern since we now know that pregnenolone is not only the precursor of all adrenal and gonadal hormones but is a neurosteroid produced in the brain.[1-3] Obviously the brain produces it for good reasons including neurogenesis and receptor stability. I too have been somewhat disappointed in that it dramatically improves constitutional symptoms but doesn't lower opioid dosages very much if at all. I have had opioid-maintained patients who developed apparent opioid hyperalgesia and/or non-responsiveness to their opioid regimen. Their pregnenolone serum levels were below normal, and when pregnenolone was replaced, opioid responsiveness returned to normal.

Despite little ability to reduce opioid dosages in existing patients, pregnenolone replacement in patients with low serum levels may really, as you well point out, improve their quality of life. In the long run this has got to help patients. I'm just now evaluating pregnenolone dosage and effectiveness after one year of therapy, so I'll keep you posted.

Until now I've not started HCG until cortisol, testosterone, and progesterone levels are normal. Now I'm starting HCG, 125 units twice a day, with all new patients with centralized, intractable pain regardless of other hormone levels. If the patient desires I leave them on pregnenolone, testosterone, or other hormone. When started early, I've been able to hold down the dosages of opioids and other agents.

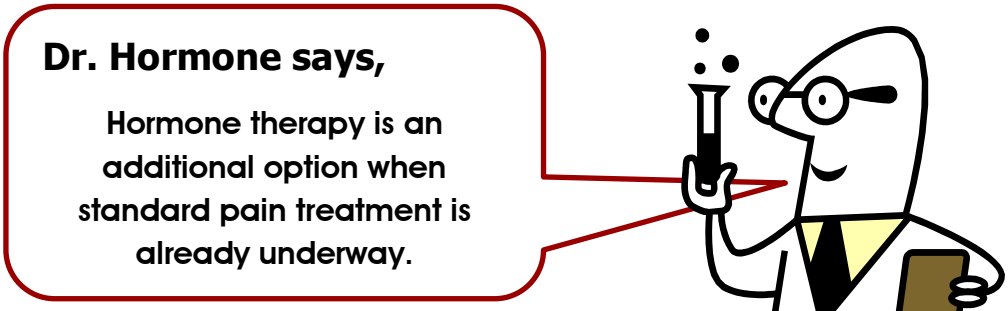
HCG has a remarkable safety and side-effect profile. Occasionally, I've seen headaches, nausea, and acne, but these nuisance effects disappear when the dose is lowered.

Please keep us posted on your observations.

Best wishes always,

Forest


1. Mensah-Nyagan AG, Meyer L, Schaeffer V, et al. Evidence for a key role of steroids in the modulation of pain. Psyconeuroendocrinology Vol 34, Issue SUPPL. I, 2009;S169-S177.
2. Plassart-Schiess G, Baulieu F. Neurosteroids: Recent findings. Brain Research Reviews 2001;37:133-140.
3. Morfin R, Young J, Corpechot C, et al. Neurosteroids: pregnenolone in human sciatic nerves. Proc Natl Acad Sci 1992;89:6790-6793.



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