onstrated inadequate adrenal reserve by failing to double their baseline cortisol concentration. All patients with high or low serum cortisol concentration demonstrated a normal cortisol concentration following pain control with a long-acting opioid including methadone, extended-length morphine or oxycodone, or transdermal fentanyl. This study suggests that severe, chronic pain may produce profound abnormalities of serum cortisol and cortisol reserve, and normalization of these alterations may require pain treatment with long-acting opioids.

(230) Evidence of a Clinical Neuroendocrine Syndrome in Severe Chronic Pain

Authors: Forest Tennant, Veract Intractable Pain Centers; Laura Hermann, Veract Intractable Pain Centers

Severe, chronic pain is postulated to produce an extended stress state with overstimulation of the autonomic nervous system and hypothalamus-pituitary-adrenal axis (HPA). To determine if this postulate is valid, we studied 60 patients who were consecutively admitted to ambulatory treatment for severe, chronic pain. All had chronic pain for over one year and characterized their pain as being constantly present, interfering with sleep, and debilitating to the point of being bed-or house-bound without opioid treatment. All were referred after failing multiple pain treatments, and all were being treated with low dosages of various oral opioids which reported to be inadequate. To evaluate these patients, pressure and pulse rates were determined at monthly intervals for four consecutive months. A morning blood specimen was taken to determine serum concentrations of the adrenal hormones, cortisol, pregnenolone, dehydroepiandrosterone, and androstenedione. Fifty-five (91.7%) subjects demonstrated hypertension above 130/90 mmHg and/or tachycardia above 84 beats per minute. Fifty-one (85.0%) demonstrated one or more abnormalities of serum adrenal hormone concentrations. All 60 subjects (100%) demonstrated at least one cardiovascular or adrenal hormone abnormality. This study suggests that severe, chronic pain may be associated with a neuroendocrine syndrome that may, itself, have clinical complications, and adequate pain control should be such that identified neuroendocrine abnormalities are normalized.

(231) Use of Transmucosal Fentanyl in Non-Malignant, Chronic Pain

Authors: Forest Tennant, Veract Intractable Pain Centers; Laura Hermann, Veract Intractable Pain Centers

Transmucosal fentanyl (TF) has recently become available for treatment of breakthrough pain in cancer patients who are already tolerant to opioids. In addition to cancer patients, there is a growing number of chronic pain patients who regularly use and are tolerant to opioids and require a breakthrough opioid for adequate pain control. This pilot study was done to determine if TF is effective and acceptable to non-malignant, chronic pain patients who are opioid tolerant and require a breakthrough opioid(s) for pain control. Sixty patients with chronic, non-malignant pain who were maintained on a long-acting opioid and who required breakthrough pain control were given TF in an initial dose of 400 or 600 mcg per single, transmucosal administration. Among the study group 35 (58.3%) experienced chronic pain due to injuries to the spine and 25 (41.7%) were due to medical conditions other than cancer. After at least three months of usage, patients were asked if they desired to continue TF and the reason(s) why they believed it to be effective. Fifty-eight (96.7%) of these subjects perceived that TF was an effective breakthrough opioid and desired to continue it. The single, effective dosage ranged from 800 to 1600 mcg per administration, and the number of separate monthly dosages ranged from 2 to 360. The majority of patients used TF only for emergency, pain purposes but others preferred TF as their major breakthrough opioid and ceased use of other short-acting opioids including injectable meperidine. Reported reasons for widespread patient acceptance included TF’s fast action, fewer bed-bound days, increased energy, decreased use of other opioids, less depression, and fewer emergency room visits. This pilot study indicates that TF is effective and desired as a preferential opioid for breakthrough pain by a high percentage of chronic, non-malignant pain patients.

(232) Botulinum Toxin Type B Decreases Pain in Patients with Cervical Dystonia

Authors: Richard Trosch, The Parkinson’s Disease and Movement Disorders Center

Neck pain occurs in a majority of patients with cervical dystonia. The cause of pain is unknown but may be attributable to the presence of spasms in dystonic or compensatory cervical muscles. Pain also occurs in other dystonic conditions. Because it acts to alleviate excessive muscle contraction, botulinum toxin may be a reasonable therapeutic treatment of painful dystonic conditions. In this analysis, the efficacy of the type B serotype (BoNT-B; Myobloc™) in reducing pain was evaluated using pain and quality of life data from two randomized, placebo-controlled clinical trials of patients with cervical dystonia (Brashear A et al. Neurology. 1999;53:1439–1446; Brin MF et al. Neurology. 1999;53:1431–1438). The first study consisted of three BoNT-B dose groups, including placebo (n = 36), 5000 units (U) (n = 36), 10,000 U (n =