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Short Communication

General Theory of Inflammation. Patient Education Key to Microdose Therapy for Chronic Inflammation Control

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Microdose therapy is patient self-administration of hydrocortisone with stress management to control chronic inflammation within inflammation disorders [1]. Using microdose therapy, patients require so little hydrocortisone that overdose effects are avoided. Using this plan, patients average ingesting less hydrocortisone to achieve superior symptom control than low dose, daily hydrocortisone achieves, hence the given name micro dose therapy. The chronic inflammation cause is the weakening hydrocortisone surge in the blood produced by an activated hypothalamic-pituitary-adrenal (HPA) axis. As it weakens, short-term, beneficial inflammation increasingly evolves into chronic inflammation. The HPA axis activates only when stresses as infections, injuries, allergies, and emotional traumas occur. Much of the time, the axis is relaxed. The chronic inflammation solution is to teach patients to take hydrocortisone tablets on the bad days and not on the good ones. When starting micro dose therapy, it is impossible to differentiate bad days from good ones. Therefore, patients must begin micro dose therapy with a micro dose shower, a standard induction period of daily hydrocortisone, to achieve a minimum symptom state. From the latter, patients are able to distinguish bad days from good ones, and patient self-administration of hydrocortisone is successful.

The micro dose therapy protocol is:

a) Month 1: Achieve an objective 75% symptom reduction to a minimum symptom state using the micro dose shower consisting of a hydrocortisone induction period of pharmacological hydrocortisone dosages + hypoallergenic food diet [2] + a broad spectrum antibiotic [3] + stress minimization.

b) Month 2: Continue maintaining the minimum symptom state by discontinuing the hydrocortisone induction period + using micro dose boosters (5-day, low-dose hydrocortisone regimens) to quench reoccurring disorder flares + introduce new foods one-at-at time to the base hypoallergenic food diet only when patient is at the minimum symptom state to determine if it causes a flare + a broad spectrum antibiotic.

c) Month 3: Continue maintaining the minimum symptom state by using micro dose boosters to quench reoccurring disorder flares + introduce new foods one-at-at time to the base hypoallergenic food diet only when patient is at the minimum symptom state to determine if it causes a flare + discontinue the broad spectrum antibiotic. If symptoms increase significantly upon antibiotic discontinuance, repeat using the broad-spectrum antibiotic one more month, then again discontinue.

d) Month 4: Continue maintaining the minimum symptom state by using micro dose boosters to quench reoccurring disorder flares for rest-of-life + teach patients: how to modify the micro dose booster to minimize hydrocortisone use; the maximum hydrocortisone safe use limit per month; hydrocortisone overdose effects, and to repeat the micro dose shower every 6 months to quench undetectable inflammation.

Micro dose therapy averages 76% symptom improvement for inflammation disorders [1]. Teachers of micro dose therapy should establish this percentage goal for each patient. The patient must be taught to take the major role in managing his/her chronic inflammation. In order to accomplish this, the inflammation must be measured daily. If inflammation is not measured, it cannot be managed. The default method, daily hydrocortisone ingestion, works satisfactorily for patients until the adrenal glands have become shrunken and refuse natural hydrocortisone production (adrenal

suppression). After about 6 months of daily use, the patient will have gained significant weight and gotten weak bones - bones that risk fracturing while participating in everyday tasks. These are consequences hydrocortisone overdosing. To avoid overdosing, hydrocortisone must be taken only when the HPA axis is activated and then to restore the resultant hydrocortisone surge to its optimum size and not taken at other times when the HPA axis is relaxed. In this way so little is added to the body to control chronic inflammation that overdosing is avoided.

Patient participation in managing chronic inflammation is necessary to avoid overdosing. Hydrocortisone supplementation must be done only when the hydrocortisone surge is occurring. Neither the patient nor clinician can detect when the HPA axis hydrocortisone surge is occurring nor if it has become weakened. However, the latter betrays itself to the patient by symptoms significantly worsening as the short-term, beneficial inflammation evolves into chronic inflammation experienced as bad days for the patient. When a patient is having a bad day, it is the time to begin a micro dose booster to restore the surge enabling the latter to quench the intensifying inflammation that is making the bad day for the patient. The maximum hydrocortisone safe use limit for administration is 420 mg per month to 1,140 mg per month for the less tolerant elderly women to the more tolerant men, respectively [4]. Empirically patients average experiencing 3.3 inflammation disorder flares a month. Hence, they must have 4 micro dose boosters available monthly to quench these flares as they occur. To not exceed the monthly maximum hydrocortisone safe use limit, each micro dose booster must contain no more than 25% of the monthly maximum hydrocortisone safe use limit. The micro dose booster is to be ingested over an empirically optimized 5 days to quench each flare. The first day dosage is to be ingested at time of flare recognition with the remaining 4 days of dosages taken at 8-9 am since only small inflammation flares are quenched by small amount of hydrocortisone in the micro dose booster. In summary, the hydrocortisone amount to be taken by the patients for hydrocortisone surge restoration is the minimum necessary to alleviate the increasing symptoms what makes a bad day for the patient. Using the limit of 4 micro dose boosters per month forces the patient to have 10 irregular-spaced hydrocortisone holidays per month. It is during these holidays the body's natural adrenal hydrocortisone production is exercised to maintain the body's hydrocortisone production.

Patient self-administration of hydrocortisone by itself satisfies about half of the patients for adequate control of their inflammation disorders. The remainder will be unsatisfied until stresses, ie, the inflammation initiators, are also minimized simultaneously. The initiators are allergies, infections, injuries, and emotional traumas. Food allergies cause inflammation in patients with inflammatory disorders whose bodies have become incapable of adequately handling inflammation from any source [2]. About half of those with inflammation disorders are complicated by allergies. For systemic inflammation disorders, food allergies are more important than air Bourne ones. Food allergies can be identified and eliminated via standard methodologies. Occult infections initiate inflammation as well. Broad spectrum antibiotic administration has proven effective for about half of those with rheumatoid arthritis, one of the inflammation disorders [3]. Injuries initiate inflammation as well. When patients are taught over exercise and over work creates inflammation flares and thus bad days, they will moderate exercise and work. Emotional trauma, both good and bad, initiate inflammation as well. When patients are taught that a peaceful, simple lifestyle significantly improves average symptom control, they will change. Hydrocortisone is preferred for micro dose therapy vs. its synthetics. The use of synthetics masks the reality that hydrocortisone is a hormone; hormones have no side effects; hormones have overdose effects; and hormones are regulators when administered must be managed for an objective not relegated to some standard dosage that fits all.

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