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ALA/DMSA Mercury Detoxification Protocol

The unique advantage of this protocol is that literature pharmacology and pharmacokinetics were put into standard textbook formulae to design an appropriate detox approach in the manner major drug companies often do when seeking FDA approval for a new drug to treat a specific condition.

Protocol

This detoxification protocol uses alpha lipoic acid (ALA), an over the counter nutritional supplement, and may optionally also use DMSA or DMPS. All are administered orally with adequate frequency to maintain reasonably steady blood levels.

ALA detoxification is effective for the removal of mercury and arsenic from the brain. DMSA is effective for the removal of lead, and assists in the removal of mercury. DMPS assists in the removal of mercury and arsenic.

Due to its pharmacokinetics, ALA must be administered no less frequently than every 4 hours. If it is administered less often, e. g. every 8 hours, it preferentially concentrates mercury into the highest affinity tissues. Most patients on infrequent ALA suffer an increase in symptoms rather than a reduction. By administering it at least every 4 hours the toxins are preferentially removed rather than redistributed.

It is essential to continue to administer ALA at night. If the nighttime doses are skipped the chelation cycle must be ended and several days must elapse before chelation is started again.

Chelation is done by giving ALA round the clock for several days, then skipping at least as many days and repeating. It is necessary to have skip periods to avoid increasing body levels of copper and zinc too much as ALA inhibits their excretion. Chelating for 3 days and the 2 intervening nights then skipping at least the rest of the week is practical in terms of patient (and caretaker) tolerance for lost sleep and side effects. Giving the ALA every 3 hours during the waking period and every 4 during sleep seems to work well.

DMSA changes the side effect profile of ALA and also accelerates detox by 30-40%. DMSA must be given no less often than every 4 hours and it is best to give it with the ALA for convenience. DMPS may also be used orally in combination with ALA. Subjectively this leads to a much lower side effect profile. DMPS must be administered no less often than every 8 hours. Administration with every other ALA dose is suggested for simplicity.

Reasonable dosages are 1/8 to 1/2 mg per pound for each of ALA, DMSA and DMPS. There is no need for any specific ratio between them – most people adjust their ALA dosage up and down to find a level where side effects aren't bothersome and then stay at that dosage. Since toxin removal goes as the square root of chelator dose there is no reason to tolerate substantial side effects in order to hurry things along.

Side effects are an increase in symptoms or appearance of new symptoms during the chelation cycle and for up to one day afterwards.

It is necessary to administer antioxidants due to the increased oxidative stress toxin mobilization causes. B complex, C and magnesium should be given 4 times a day, and zinc, E, carotenes, etc. at least daily. The B and C are not effective if not given 4 times a day due to their pharmacokinetics.

Diagnosis

Since this detox protocol is only effective for specific metals a good diagnosis is required. This may be done according to the checklist method in *Amalgam Illness: Diagnosis and Treatment*. Hair element analysis is especially helpful. For mercury, use the procedure at <http://hometown.aol.com/noamalgam/countingrules> to interpret the results.

Since autism appears to be the final common pathway of several different underlying conditions differential diagnosis against all other causes must be performed. A high index of suspicion for some other cause should arise if the patient does not show marked improvement within 3 cycles if under 8 years, or 10 cycles if over age 8.

Tracking and management

While hair elements, fractionated urine porphyrins, and any other laboratory abnormalities can be used to verify that therapy is working as they will normalize, there is no appropriate “tracking test.” The determination of when chelation is finally done is subjective and is performed clinically when there are no further improvements and there are no longer side effects. Test results normalize well before therapy is complete.

Common conditions that should be checked for and treated to reduce symptoms and side effects are: elevated plasma cysteine (test at Great Smokies Labs) which is treated with dietary and supplement sulfur exclusion (thus no NAC or glutathione for this 50% of your patient population); low RBC magnesium which is treated with oral supplementation to just short of laxative effect, and intramuscular injections if needed; impaired cortisol response which is treated with stress avoidance and medications if unavoidable; impulsivity etc. (or abnormal) which can be treated with carbamazepine or valproate; fast liver phase 1 metabolism (causing chemical sensitivity with anxiety or agitation due to hydrocarbon fumes) treated with niacinamide qid or grapefruit juice qid.

If the case is requiring a large amount of management, go back to differential diagnosis, and make sure that the supplements (e. g. NAC, glutathione) aren't harmful to that specific individual by appropriate testing.

For more information

Amalgam Illness: Diagnosis and Treatment - <http://hometown.aol.com/noamalgam>.

Continuing education - <http://hometown.aol.com/noamalgam/coursefler>.

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Parent reports are on <http://www.egroups.com/community/Autism-Mercury>.