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INITIAL PSYCHIATRIC TREATMENT PLAN

INTERIM REPORT

May 6, 2023

RE: Alkiviades “Alki” David

DIAGNOSES

- (S06.2XAS) Diffuse traumatic brain injury with loss of consciousness of unspecified duration
- (F90.2) Attention-deficit hyperactivity disorder, combined type
- (F63.81) Intermittent explosive disorder
- (F22) Delusional Disorder

BACKGROUND

In many ways the mind is what defines a person, who they really are. What we call the mind is an amalgam of emotion, temperament, capacities, and behaviors, yet how a unique “person” emerges from the brain’s circuitry remains poorly understood. Until only very recently, most of what we knew of this process was learned from observing unfortunates who had suffered traumatic brain injuries (TBI). Diagnosing and treating those who have suffered these injuries lies at the ill-defined boundary between neurology and psychiatry. This task, difficult to start with, is made even more uncertain because the medical literature lacks enough well-designed clinical trials to provide firm guidance. Without the established probabilities afford by clinical trial data, treatment plans require frequent reevaluation and adjustment.

Mr. David suffers from objective neurological damage and apparent psychiatric pathology that goes far beyond diminished attention or moodiness¹. It is often surprising to those unfamiliar with TBIs how

¹ Mr. David’s clinical picture is all too common, but somewhat difficult to characterize because of short-coming in the medical literature. For example, neurology in this country uses a different nomenclature than psychiatry and psychiatry in the USA uses a different diagnostic classification system than psychiatry in the rest of the world. For the purposes of this report all diagnoses will use the *International Classification of Diseases, Tenth Revision (ICD-10)* coding, but reference the American Psychiatric Association *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR)* where clinically indicated.

similarly they can present behaviorally. For example, a 30-year follow-up of TBI patients showed a 2-4 fold increase in the rate of personality disorders², the most prominent being what was then termed Organic Personality Syndrome (OPS: F07.0). The diagnostic criteria (below) for OPS should be easily recognizable to anyone who has met Mr. David.

Organic Personality Syndrome *A persistent personality disturbance, either lifelong or representing a change or accentuation of a previously characteristic trait, involving at least one of the following:*

(1) affective instability, e.g., marked shifts from normal mood to depression, irritability, or anxiety.

(2) recurrent outbursts of aggression or rage that are grossly out of proportion to any precipitating psychosocial stressors.

(3) markedly impaired social judgment, e.g., sexual indiscretions

(4) marked apathy and indifference

(5) suspiciousness or paranoid ideation

...Specify explosive type if outbursts of aggression or rage are the predominant feature.

TABLE 1. Diagnostic criteria for Organic Personality Syndrome³ : [**BOLD**: those traits exhibited by Mr Alkiviades]

INITIAL TREATMENT PLAN

Mr. David impaired social functioning, and by extension, his legal problems are largely caused by the psychiatric challenges he faces. While each of his psychiatric diagnoses deserve to be addressed eventually, his treatment plan should initially focus on the following target symptom: Paranoia (delusional psychosis), Attention deficit/Impulsivity, Intermittent explosivity(rage) and, while his mood symptoms can be addressed later.

(I) PSYCHOSIS Paranoid delusions generally improve with pharmacotherapy. There are a plethora of medication that would a priori be expected to have sufficient, though not entirely equal, effectiveness^{4,5} and

² Koponen, S., Taiminen, T., Portin, R., Himanen, L., Isoniemi, H., Heinonen, H., Hinkka, S., & Tenovuo, O. (2002). Axis I and II psychiatric disorders after traumatic brain injury: a 30-year follow-up study. *The American journal of psychiatry*, 159(8), 1315–1321. <https://doi.org/10.1176/appi.ajp.159.8.1315>

³ American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders (DSM–III–R)*; 3rd ed., revised). Washington, DC

⁴ Huhn, M., Nikolakopoulou, A., Schneider-Thoma, J., Krause, M., Samara, M., Peter, N., ... Leucht, S. (2019). Comparative efficacy and tolerability of 32 oral antipsychotics for the acute treatment of adults with multi-episode schizophrenia: a systematic review and network meta-analysis. *The Lancet*. doi:10.1016/s0140-6736(19)31135-3

⁵ Abou-Setta AM, Mousavi SS, Spooner C, et al. First-Generation Versus Second-Generation Antipsychotics in Adults: Comparative Effectiveness [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2012 Aug. (Comparative Effectiveness Reviews, No. 63.) Table 1, List of antipsychotics included in the comparative effectiveness review* Available from: <https://www.ncbi.nlm.nih.gov/books/NBK107237/table/introduction.t1/>

are available both in the United States and his native country. Were it simply a question of which medication would be most effective, the first choice of therapy would be Clozapine. However, in practice this is never the first medication trialed for a host of reasons (e.g. requirement for weekly blood monitoring during the first year, etc.). Since this entire class of medications carry a high side effect burden specific medication choice will need to be governed by his idiosyncratic tolerability, which will have to be determined empirically through trial and error, as well as overall compliance. In my experience, Aripiprazole⁶ and Cariprazine⁷ are among the best tolerated and most effective medications in this class. The advantage of the latter is that it is less sedating and weight neutral, while the former is available in the form of a monthly long-acting injectable. I would advise a discussion of the risk, benefits and alternatives of these medications and initiating a titration schedule of the chosen medication as soon as possible.

(II) ATTENTION DEFICIT/IMPULSIVITY Attention problems are very common after TBI. In moderate–severe TBI, 60% report chronic, long-lasting problems with inattention⁸. Stimulants of the amphetamine class remain the most widely studied medication class used to treat posttraumatic attentional impairments⁹. While methylphenidate is the best studied, my clinical experience suggests that long-acting dextroamphetamine preparations are more effective in adults like Mr. David, with comorbid attention deficits and dysexecutive function. Specifically, I would initiate therapy with lisdexamfetamine (Vyvanse), which has been trialed in TBI patient¹⁰s and was not found to exacerbate delusions in already psychotic patients¹¹. In addition, I would initiate a trial of extended-release guanfacine, a non-amphetamine modulator of norepinephrine signaling that can reduce impulsivity and hyperactivity.

(III) RAGE-AGGRESSION Hair-triggered rage or perseverative aggression can easily develop following traumatic injury to the frontal lobes.. The first line treatment for these explosive behaviors are selective serotonin reuptake inhibitors with Fluoxetine having the best empirical support¹² (Prozac). This medication should be started at 10-20mg per day and titrated as tolerated to 60mg per day for 6-12 week. If the rage

⁶ Weiser M, Davis JM, Brown CH, Slade EP, Fang LJ, Medoff DR, Buchanan RW, Levi L, Davidson M, Kreyenbuhl J. Differences in Antipsychotic Treatment Discontinuation Among Veterans With Schizophrenia in the U.S. Department of Veterans Affairs. *Am J Psychiatry*. 2021 Oct 1;178(10):932-940. doi: 10.1176/appi.ajp.2020.20111657. Epub 2021 Jul 14. PMID: 34256606.

⁷ Németh, G., Laszlovszky, I., Czobor, P., Szalai, E., Szatmári, B., Harsányi, J., ... Fleischhacker, W. W. (2017). Cariprazine versus risperidone monotherapy for treatment of predominant negative symptoms in patients with schizophrenia: a randomised, double-blind, controlled trial. *The Lancet*, 389(10074), 1103–1113. doi:10.1016/s0140-6736(17)30060-0

⁸ Ponsford J, Alway Y, Gould KR. Epidemiology and Natural History of Psychiatric Disorders After TBI. *J Neuropsychiatry Clin Neurosci*. 2018 Fall;30(4):262-270. doi: 10.1176/appi.neuropsych.18040093. Epub 2018 Jun 25. PMID: 29939106.

⁹ Frenette, A. J., Kanji, S., Rees, L., Williamson, D. R., Perreault, M. M., Turgeon, A. F., ... Fergusson, D. A. (2012). Efficacy and Safety of Dopamine Agonists in Traumatic Brain Injury: A Systematic Review of Randomized Controlled Trials. *Journal of Neurotrauma*, 29(1), 1–18. doi:10.1089/neu.2011.1812

¹⁰ Tramontana, M. G., Cowan, R. L., Zald, D., Prokop, J. W., & Guillaumondegui, O. (2014). Traumatic brain injury-related attention deficits: Treatment outcomes with lisdexamfetamine dimesylate (Vyvanse). *Brain Injury*, 28(11), 1461–1472. doi:10.3109/02699052.2014.930179

¹¹ <https://clinicaltrials.gov/ct2/show/results/NCT00922272>

¹² Coccaro EF, Lee RJ, Kavoussi RJ. A double-blind, randomized, placebo-controlled trial of fluoxetine in patients with intermittent explosive disorder. *J Clin Psychiatry*. 2009 Apr 21;70(5):653-62. doi: 10.4088/JCP.08m04150. PMID: 19389333.

type behaviors remain unabated the second line therapy would be to initiate a course of a stabilizing anticonvulsant. Although phenytoin is the best studied it has a lower degree of patient tolerability than newer agents like oxcarbazine. Since compliance will be a major concern in this case, I would choose oxcarbazine at an initial dose of oxcarbazepine of 150 or 300 mg per day. The daily dose could then be titrated by 150-300mg every 2-4 days, as tolerated, to a target dose of 600-1200mg twice daily. Additionally, propranolol¹³ might be used adjunctively to reduce the severity, if not frequency of these episodes.



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¹³ Williamson D, Frenette AJ, Burry LD, Perreault M, Charbonney E, Lamontagne F, Potvin MJ, Giguère JF, Mehta S, Bernard F. Pharmacological interventions for agitated behaviours in patients with traumatic brain injury: a systematic review. *BMJ Open*. 2019 Jul 9;9(7):e029604. doi: 10.1136/bmjopen-2019-029604. PMID: 31289093; PMCID: PMC6615826.

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