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Stephen Paddock's Unrecognized Illness

February 23, 2018 Mark R. Megahan

Introduction

Stephen Paddock suffered from an incurable and untreatable condition that undoubtedly played a prominent role in the tragedy which occurred October 1, 2017.

Either law enforcement is unaware of the role that chemical sensitivity played in the final decisions made by Stephen Paddock, or else they are downplaying their findings intentionally.

Rank and file investigators would generally not be expected to have any context for what they are seeing but those with a medical background should have made the connections.

Statements made by the Clark County Sheriff and others show a conscious effort to intentionally trivialize certain aspects of Mr. Paddock's medical history.

Based on my review of the preliminary investigation report, the autopsy report, and the Stanford brain analysis report, investigators only briefly touch on items which, to me, are clear indicators and biological markers of "Multiple Chemical Sensitivity."

The special brain study done at Stanford University confirms the presence of certain biomarkers expected to be found in an individual adversely affected by airborne toxins. The author of the report fails to note the significance.

At the stage of progression Mr. Paddock had reached, frustration and anger are typical emotional responses. Suicide is a common cause of death for those who are afflicted with this disease.

Mr. Paddock appears to have progressed to the phase of the syndrome where annoyance becomes incapacity. Every day, he was becoming less tolerant of the casinos he visited regularly.

Stephen Paddock's ability to concentrate was increasingly affected by chemicals in the casino environment, which caused him unusually higher gambling losses than normal for his style of play.

Evidence indicates Mr. Paddock requested and received at least one accommodation from the hotels he visited regularly. He may have requested others.

Chemical sensitivity undoubtedly played a significant role in why Mr. Paddock chose to end his life. Further investigation may reveal other highly significant connections, possibly shedding light on why Mr. Paddock selected the Mandalay Bay hotel as his base of operations.

All emphasis contained in this report is mine unless otherwise specified.

What is MCS

Research shows¹ that approximately 48 million people in the United States are adversely affected, even disabled, by chemicals which are generally considered safe for everyday use. Stephen Paddock was one of those individuals.

There is no cure for hypersensitivity or any way to reverse the condition once it manifests. The only effective treatment is total avoidance of all chemical triggers.

Also known as chemical intolerance (CI), Environmental Illness (EI), Toxicant Induced Loss of Tolerance (TILT), or chemical hypersensitivity, it is defined as:

“an **emerging** disabling illness characterized by **chronic adverse effects** from exposure to **low levels** of chemicals in the modern human environment.”

Symptoms can range from mild to disabling and commonly include fatigue, nausea, **confusion, irritability**, dizziness, and headache.

Perfumes, air fresheners, smoke, household and industrial cleaners, dry cleaning chemicals, petrochemicals, and exhausts are some of the most common reaction causing substances.

Prevalence rates vary over a wide range of studies.

“Chemical sensitivity appears to be an international problem. In the US, Caress and Steinemann found that 12.6% of a household population study reported being unusually sensitive to common chemical substances. Meggs et al found that 33% of persons in a US household population survey reported some chemical sensitivity (CS), with 3.9% reporting becoming ill every day from exposures. Katerndahl et al found that 20% of 400 people in family medicine waiting rooms met the criteria for CI.”

A conservatively accurate estimate is that 15% of the general U.S. population are affected and 4% of the general population are totally disabled by the condition.

MCS is a complex disease², described as:

“a multisystem disorder that manifests as a result of exposure to various environmental contaminants (solvents, hydrocarbons, organophosphates, heavy metals) at concentrations below the “Threshold Limit value” (TLV) that are considered toxic doses for the general population.”

Chemical hypersensitivity is codified as a clinical condition by the “International Classification of Diseases” (ICD10) under the following codes:

“J68.9: Unspecified respiratory conditions due to inhalation of fumes, gas and chemical vapors”

“T78.4: unspecified allergies (allergic reaction Nitrous Oxide System (NOS)-hypersensitivity NOS-idiosyncrasy NOS)”

1 Gibson et. al. [Experiences of persons with multiple chemical sensitivity with mental health providers](#) Journal of Multidisciplinary Healthcare, April 6 2016

2 Rossi and Pitidis [Multiple chemical sensitivity: review of the state of the art in epidemiology, diagnosis and future perspectives](#) Journal of Occupational and Environmental Medicine: Post Acceptance: November 3, 2017

A primary characteristic of MCS is the exceptionally low level of contaminants, in the range of approximately 5 parts per billion, that trigger debilitating symptoms.

"Hirzy and Morison (1989) report that as little as five parts per billion (ppb) of 4-PC induced illness. They believe that a metabolite of 4-PC found in the carpeting is 'capable of attacking DNA and of affecting detoxifying enzyme levels, processes hypothesized to be involved in induction/expression of multiple chemical sensitivity.'"³

A recent Japanese study focused on the effect that small dose exposures have on MCS patients.⁴

"We would like to report on the considerable difficulty in establishing the causal relationship between exposures to small amounts of chemical substances in the environment compared to large amounts."

"Chemical sensitivity (CS) is considered to be a syndrome causing a variety of indefinite complaints due to contact with a very small amount of chemicals in the surrounding environment."

"Any contact with even an extremely small amount of the substances listed above, which are tolerated by healthy people, may cause symptoms for people who have CS. Reactive symptoms include olfactory hypersensitivity, including irritation of the eyes, nose, and throat, erythema, itching of the skin, easy fatigue, headaches, poor concentration, dizziness, nausea, and others; there are also a variety of non-specific symptoms along with autonomic symptoms. In severe cases, **those with CS may also exhibit strong neuropsychiatric symptoms.**"

The study included what is considered the "standard" definition for the condition:

"The definition by Cullen MR from Chicago University is general and concludes as follows: 'Group of clinical syndromes which are observed after re-contact with the chemical substances of a fairly small amount and the same quality as chemical substances being in contact with the patient over a long period or caused poisoning symptoms in the past.' In other words, **a patient develops hypersensitivity to the chemicals such that exposure to very small amounts in the future may cause a reaction.**"

MCS is a progressive disease with four stages. They range from the case where one has the genetic predisposition but has not yet acquired symptoms, up to chronic deterioration or death at the other end of the scale.⁵

Stage 0 - Tolerance:

In this stage the individual is normally able to adapt to the environment that surrounds him, unless limits for certain hazardous substances are exceeded.

Stage 1 - Sensitization:

This stage could be experienced as a result of chronic exposure to low doses and/or after individual acute exposures. The patient may complain of the following disorders: dermal, ocular and respiratory tract irritation, itching, **fatigue, muscle and joint pain, headache**, nausea, tachycardia, changes in blood pressure, balance problems, sensations of cold or fever, dyspnea, **cognitive problems**, asthma, insufficient peripheral circulation, immune disorders and gastrointestinal diseases, etc.

³ Gibson, P.R. Chapter Four Excerpted from: [Multiple Chemical Sensitivity: A Survival Guide](#) (2006) Churchville, VA: Earthrive Books

⁴ Sakabe, et al [Chemical Sensitivity-The Frontier of Diagnosis and Treatment](#) Jpn J Clin Ecol (Vol.25 No.2 2016)

⁵ Rossi , *op. cit.*

Stage 2 – Inflammation:

Chronic inflammation in different tissues, organs and systems. Various disorder development, detectable through specialist examination: dermatitis, vasculitis, immune, endocrine, metabolic diseases, food and environmental allergies (dust, pollen, etc.), arthritis, colitis, rhinitis, dyspnea, asthma, muscle fatigue, fainting, **cognitive delays**, poor peripheral circulation, bleeding etc.

The persistence and aggravation of this stage depends on the exposures, their avoidance and undergone therapy.

After an exposure, symptoms may persist and oscillate for days, if not weeks.

Stage 3 - Deterioration:

Chronic inflammation produces **damage to tissues and organs**. CNS (central nervous system), kidneys, liver, lungs, immune system, circulatory, vascular, dermal are affected. Lupus, ischemia, heart failure, cancer, autoimmunity, **neurodegenerative** and **psychiatric syndromes**, hemorrhagic forms, porphyria are the most common diseases in this stage.

Rossi also notes:

Given that most of the chemicals implicated are **common environmental pollutants**, it is practically **impossible to avoid them completely** and therefore individuals who have the disease will be, **depending on the stage reached, more vulnerable than the general population**. Moreover, given the diagnostic difficulty, in the early stages *it is possible that [neither] the doctors nor the patients find the causal link between the symptoms reported and the exposures. The MCS could therefore not be diagnosed as such and be confused with other diseases.*

Indicators Paddock Had MCS

Statements by Stephen's brother, Eric Paddock, clearly provide some of the strongest publicly available indicators of chemical sensitivity.

In a series of text messages, Eric told Reuters⁶ that Stephen's romantic partner, Marilou Danley, went out of her way to avoid triggering his “allergy like” reactions.

Referring to the passport-style [photo](#) circulated by news outlets:

"The reason Marilou looks so plain in that picture they keep posting of her is because for him she would not wear perfumes or hair sprays or anything with scents in it because it affected him."

Being “bothered” by perfumes and cosmetics is by far the most commonly reported symptom for MCS patients. Eric also listed a number of other markers that stand out to anyone familiar with the condition.

"He was also allergic to many pills," which made him "unable to renew his pilot's license."

Stephen "had flown planes since he was a teenager but could not take the pills needed to reduce his blood pressure."

6 Allen, J. [Las Vegas gunman 'doted' on girlfriend but may have kept secrets](#) Reuters October 4, 2017

As noted in the Katerndahl study,⁷

“Patients who met criteria for chemical intolerance rated the **severity of their intolerances or adverse reactions to medications, medical procedures, or medical materials significantly higher** than did those without chemical intolerance.”

“The presence of chemical intolerance among relatives, **multiple medication intolerances**, complex multisystem conditions, or a prior diagnosis of somatization disorder **should raise the index of suspicion for chemical intolerance**. Use of a standardized instrument such as the QEESI may be helpful in detecting chemical intolerance. If it is found, **the physician should screen the patient for major depressive disorder, panic disorder, generalized anxiety disorder, and substance abuse, recognizing that these may be associated conditions, not necessarily causal.**”

Stephen Paddock's difficulty taking medication was also mentioned in the Preliminary Investigation report.⁸

“Paddock made numerous claims to friends and family that **he consistently felt ill, in pain or fatigued**. An interview was conducted with a **physician in Las Vegas** who identified himself as **Paddock's primary care physician since 2009**. He last saw Paddock as a patient on or around October 2016 for an annual checkup. He recalled the only major ailment Paddock had was a slip and fall accident at a casino approximately 3 years earlier, which caused a muscle tear.”

“The physician described Paddock as **"odd" in behavior with "little emotion" shown**. He believed Paddock may have had bipolar disorder however, Paddock did not want to discuss that topic further with him. **Paddock also refused anti-depressant medication but accepted prescriptions for anxiety**. He noted Paddock seemed fearful of medications, often refusing to take them. He did not believe Paddock was abusing any medications.”

It is noteworthy that MCS patients often get short term relief from occasional use of anxiety medications. That will be discussed in detail below.

Eric Paddock also mentioned that his brother,

"often wore brown cloth gardening gloves to prevent rashes from contact with cleaning chemical residues."

Eric indicates at least one casino accommodated Stephen's intolerance of airborne contaminants.

"At casinos where he was a regular, **staff obliged his requests** to wash his room's carpet with plain water."

⁷ Katerndahl, et. al. [Chemical Intolerance in Primary Care Settings: Prevalence, Comorbidity, and Outcomes](#) Annals of Family Medicine Vol. 10 No. 4 July/August 2012

⁸ Alsup, T. [LVMPD Preliminary Investigative Report 1 October/ Mass Casualty Shooting](#) January 18, 2018

How chemical sensitivity affected Stephen's life

Mr. Paddock has been extensively described as intelligent and strategic.

As reported by Dailymail, a man “who was dating Marilou Danley’s sister” had “multiple encounters with Paddock between 2013 and 2015.”⁹

“He was extremely intelligent, methodical, conservative, guarded and strategic. A **planning, thinking type of guy.**” Paddock won “a substantial amount of money using **algorithms for gambling.**”

Eric Paddock spoke about his brother’s gambling avocation to New York Magazine. He told reporters:¹⁰

"We didn't talk much. We talked when there was something to talk about. Steve had no help. Steve did not take help. He was a stand-alone guy."

Stephen had "attended Cal State Northridge." After graduation, "he was an accountant who worked several government jobs from 1976 to 1985: as a postal worker, an IRS agent, and an auditor for the Defense Contract Audit Agency. He was employed at a predecessor to the defense contractor Lockheed Martin for three years in the late '80s."

After that, Stephen "was a retiree who made a small fortune in real estate and business deals. **He's a multimillionaire.** He helped me become affluent, he made me wealthy." Stephen owned "rental properties across the country, including spots in Los Angeles and a suburb of Dallas, Texas."

He "lived an itinerant lifestyle, seemingly **centered around high-stakes gambling.** He took up gambling for fun in his retirement. **It's like a job for him. It's a job where you make money. He was a math guy. He could tell you off the top of his head what the odds were down to a tenth of a percent on whatever machine he was playing. He studied it like it was a Ph.D. thing. It was not silly gambling. It was work.**"

"He enjoyed **perks from the casinos**, like a free stay on the top floor of the Atlantic, and once won a car. He's known. He's a top player. He's the small end of the big fish. He was at the hotel for four months one time. It was like a second home."

He was not known to have "strong political beliefs, an interest in firearms, a history of violence, mental-health issues, or anything else."

Others confirm:

"That Paddock was a frequent visitor to casinos in Reno and along the Las Vegas strip."

According to the Post:

"He was known to sit for hours playing slot machines and video poker. He was spotted playing video poker at Mandalay Bay three days before the massacre."

"He **gambled tens of thousands of dollars and indulged in the perks casinos offer top players** — though he was not widely known among the most elite gamblers. A person familiar with his gambling history told the Post he was considered a 'midrange gambler.'"

"This is a man who **clearly enjoyed gambling.** He is someone who won and lost money through the years. He paid all of his bills and did so on time, never having any sort of incident. He has the profile of a responsible gambler."

He "**gambled more than \$10,000 a day several times in recent weeks, and sometimes more than \$30,000.** It's not clear whether he made or lost money on those bets."

9 Crane, E. [Stephen Paddock was brilliant, had an intimate knowledge of the Second Amendment and had a huge 'gun room', says friend, as it's revealed he had made to order weapons that cost thousands of dollars](#) Dailymail October 4, 2017

10 Kirby, J. [What We Know About Las Vegas Gunman Stephen Paddock](#) nymag October 5, 2017

Clark County Sheriff Joe Lombardo knew as of early December, 2017 that Mr. Paddock had some sort of anxiety or mental health issue.¹¹

"He was going through some bouts of depression. Since September 2015, he's lost a significant amount of wealth, and I think that might have been a determining factor on what he was determined to do. This individual was status-driven based on how he liked to be recognized in the casino environment and how he liked to be recognized by his friends and family. So obviously *that was starting to decline in the short period of time and that may have had a determining effect on why decided to do what he did. He was going in the wrong direction.*"

The LA Times picked up on a crucial point when they made a header from the phrase:

"In the solitary world of video poker, Stephen Paddock knew how to win. Until he didn't."

The reason why he "didn't" is because chemicals in the casinos were disrupting his central nervous system and confusing him while he was gambling, causing him unusually high losses.

As reported by Dailymail:¹²

"As investigators reconstruct the life and recent activities of Paddock in a bi[d] to work out a motive, details keep emerging that suggest **the gunman's mental health had deteriorated [in] the months prior to the massacre.** Paddock had reportedly experienced **significant weight loss** in the lead up to the shooting."

The search warrants requested indicate that detectives were alerted that some sort of medical condition may have contributed to the event.

Several warrants related to the residence at 1372 Babbling Brook Court list "any and all records relating to the medical or psychological/psychiatric treatment of Stephen Paddock or Marilou Danley" as items to be seized.

Under the heading "Background Of Investigation" at least one of the warrants states:

"The investigation has also revealed that Paddock may have been treated for **yet unidentified medical conditions**, and that he spent significant time and expense prior to the attack purchasing and caching the weapons and other instrumentalities he used in the shooting."

Preliminary Police Report

Other than as mentioned above, the preliminary report contained the following noteworthy entries:¹³

"An extensive joint investigation involving the LVMPD and the Federal Bureau of Investigation (FBI) began immediately after the incident into the life of Paddock. Every facet of Paddock's life was explored."

"Danley stated Paddock's **demeanor changed over the course of the last year.** According to her, Paddock had become "**distant**" and their relationship was **no longer intimate.** Paddock was described as 'germaphobic' and **had strong reactions to smells.**"

¹¹ [Montero, D. Las Vegas shooter had been losing money for two years and 'was going in the wrong direction,' sheriff says](#) LA Times December 3, 2017

¹² Crane, *op. cit.*

¹³ Alsup, *op. cit.*

“Most of the people interviewed acknowledged Paddock's gambling habits. Paddock was **known to gamble tens of thousands of dollars at a time** and played at numerous casinos. Paddock was often given complimentary rooms and meals at the casinos he frequented due to the amount of money he gambled.”

he performed a Google search for "where is hard drive located on e5570/ 09-28-17"

Under Section VIII. Suspect Autopsy the report mentioned "there was no suicide note or manifesto located inside either room."

Combined Autopsy Reports

Authorities recently released the Autopsy Report, combined with the Toxicology Report and the Stanford study of Mr. Paddock's brain. Considerable relevant information is contained in those documents. The most crucial entries relate to physical confirmation of MCS biomarkers reported by Stanford and the anti-anxiety and antihistamine medications noted on the toxicology report.

There is only one remarkable finding in Dr. Gavin's main autopsy report:

“The anterior teeth are in poor condition with a majority of the maxillary teeth being absent.”¹⁴

The chemicals found in dental offices often preclude those with chemical sensitivity from being able to tolerate dental work.

It is important to note that the only blood test results released were those submitted for toxicology. No reports of antibody levels were reported. There is no listing of spinal fluid taken as a specimen or submitted for third-party examination.

The Brain Autopsy¹⁵ performed by Dr. Vogel notes that finding "corpora amylacea" is normal but Mr. Paddock had an unusually high number of them. He claims not to know why.

"the extent of formation of corpora amylacea as noted in the microscopic description is a known incidental finding in the brains of asymptomatic older adults. In this example of **strikingly numerous corpora amylacea** there is **no apparent etiology**, consistent with the lack of any published significance to this abundance in some individuals."

Dr. Vogel notes he was not provided with Mr. Paddock's medical history. That may have been intentional on the part of Las Vegas authorities.

The mechanism behind MCS, which turns triggering contaminant molecules into physiological reactions, occurs within the limbic system structures of the brain.

Dr. Vogel reported he recovered the corpus callosum and cingulate gyrus, possible amygdala, and two pieces of the Hippocampus.

Dr. Vogel writes:

"The **most striking abnormality** in sections of the hippocampus, peri-third ventricular wall, optic nerve, corpus callosum, medial surfaces of frontal lobes are **unusually large numbers of corpora amylacea in subpial, perivascular, and minor subependymal distributions.**"

These formations are often associated with Alzheimer's as Dr. Vogel points out.

They are "characteristic of the usual age-related accumulation of corpora amylacea in these favored locations."

¹⁴ Gavin, L. [Autopsy Report](#) February 5, 2018

¹⁵ Vogel, H. [Neuropathology Report](#) December 27, 2017

Mr. Paddock has far more of them than would be expected for his age, especially as he has not been diagnosed with Alzheimer's.

Particularly significant is Dr. Vogel's notation:

"Some of the subpial regions with numerous corpora amylacea display interface ("Chaslin's") gliosis."

Furthermore, Dr. Vogel notes that certain markers of Alzheimer's are missing.

"Bielschowsky silver impregnation: **no neurofibrillary tangles or senile plaques of the Alzheimer type.**"

"Beta-amyloid: no vascular or plaque deposition."

"AT8 (phosphor tau): **no neurofibrillary tangles or senile plaques of the Alzheimer type** in the hippocampus; no subcortical expression of tau at depths of sulci or perivascular as seen in chronic traumatic encephalopathy, frontal lobe."

Another important finding is that the stains showed the presence of "GFAP" in paraffin blocks C,E,F,M with:

"some mild increase in perivascular and **subpial astrogliosis**, without obvious neuronal loss."

It has long been established that CA are astrocytes. In a section of a clinical guide for practitioners, Hilton and Shivane¹⁶ explains the process of "gliosis."

"Gliosis or astrogliosis refers to a process where astrocytes **respond to injury** by either **increasing in size or number**. In a normal brain tissue stained with routine H&E stain, astrocytes are visible only as naked nuclei. During the initial phase of injury, astrocytes increase in size and show prominent pink cytoplasm. These astrocytes are termed 'gemistocytic astrocytes' (means 'stuffed' cells)."

"**'Chaslin's gliosis'** refers to gliosis in the subpial regions and is commonly seen in patients with a long history of epilepsy. Gliosis can be identified using special stains such as PTAH or using immunohistochemistry for an antibody to GFAP."

Corpora Amylacea have their own sub-section under astrocytes.

"These are rounded gray-blue cytoplasmic inclusions containing glucose polymers ('starch body'; intensely PAS-positive) **mainly seen in the perivascular, subpial and subventricular regions**. These inclusions accumulate in aging and also in a condition called 'Polyglucosan body disease.'"

Corpora amylacea (CA), are formed in response to waste in the limbic system portion of the Central Nervous System. They appear with age and are profuse in selected brain areas in several neurodegenerative conditions.¹⁷

corpora amylacea and other polyglucosan bodies "are waste containers in which deleterious or residual products are isolated to be later eliminated through the action of the innate immune system."

"The presence of waste elements is a recurrent feature, and CA may be involved in the trapping and sequestration of potentially hazardous products, or **they may act as a system that cleans the central nervous system (CNS).**"

"We found that during their formation, some epitopes emerge and these epitopes should be considered as neo-epitopes because **they are not present in healthy structures.**"

¹⁶ Hilton, D; Shivane, A. [Neuropathology Simplified A Guide for Clinicians and Neuroscientists](#) Springer 2015

¹⁷ Augé, E. et al. [New perspectives on corpora amylacea in the human brain](#). Sci. Rep. 7, 41807; doi: 10.1038/srep41807 (2017)

Corpora amylacea are targeted by antibodies in humans similar to PAS granules studied in mice.

"We also observed that these neo-epitopes are **recognized by natural IgM antibodies** which, as they are natural, are present in the blood plasma of mice from birth and without prior contact with external antigens."

"We also found that the IgM antibodies that recognize these neo-epitopes are also present in the plasma of other mammal species, which is in accordance with the fact that natural antibodies have been fixed by natural selection during evolution and are therefore interspecific."

"Taking all the above into account and based on certain similarities between CA in human brains and PAS granules in mouse brains, we hypothesized that CA in human brains would also contain neo-epitopes that human plasma, as well as plasma from other mammal species, would contain **natural IgMs directed against them.**"

Even in the earliest days of chemical sensitivity research, it was well known that exposure to chemicals produced increased antibodies, including an increase in the IgM antibody.¹⁸

"It is well known that the interaction of the immune system with environmental chemicals can cause disease."

"The function of the immune system is to protect the organism from invasion by pathogens such as bacteria, fungi, viruses, and parasites."

"The mechanism of environmental adjuvancy may be that inflamed tissue processes antigen. Substances like sulfur dioxide and ozone produce tissue irritation, which then leads to inflammation with the recruitment of macrophages to the area. Macrophages then present antigens in the area to lymphocytes to **produce an immune response to the antigen.** Subsequent exposure to either the adjuvant or the antigen could produce further inflammation and processing of other antigens."

"One group of investigators has proposed that antibodies to formaldehyde coupled to human serum albumin (f-HSA) may be a good marker for chemical sensitivity (Broughton and Thrasher, 1988; Thrasher et al., 1988; Thrasher et al., 1989). These investigators found **low level IgG, IgE, and IgM titers to f-HSA, in the 1:4 to 1:16 range, in chemically sensitive patients.**"

Glial fibrillary acidic protein (GFAP) has been known since at least 1995 to be a reliable biomarker for chemical sensitivities.¹⁹

"Many 'stress proteins' and 'early genes' are being identified in laboratory experiments as **potential markers of toxic exposures**, but they seldom can point to specific mechanisms or structures in the nervous system. I prefer an approach that examines neuronal cell-specific proteins. **The cytostructural protein of astrocytes in the brain, glial fibrillary acidic protein (GFAP), marks reactive gliosis in response to neuronal injury.** Because metals are absorbed by astrocytes before neural damage, **the astrocytic marker GFAP proved to be a good index of early toxicant-induced changes in the brain and steered me to a candidate marker in human serum.** The development of molecular markers has been facilitated by new ELISA methods that provide economical, quantitative assays for **potential markers of neurotoxicity.**"

Based on the foregoing, exposure to airborne chemicals initiated the formation of corpora amylacea to sequester limbic system waste byproducts. The CA in turn produce neo-epitopes that trigger IgM antibodies as a response.

18 Meggs, W. [Immunological Mechanisms of Disease and the Multiple Chemical Sensitivity Syndrome](#) National Academy of Sciences 1992 p. 160

19 Evans, H Markers of [Neurotoxicity: From Behavior to Autoantibodies Against Brain Proteins](#) Clin. Chem. 41/42, 1874-1881 (1995)

The significantly increased numbers of CA along with the presence of GFAP noted in Dr. Vogel's report are predicted by widely accepted models regarding MCS etiology. It appears that Dr. Vogel was hired to specifically rule out chemical sensitivity. By reporting the positive findings but failing to report their significance, the entire issue was quietly and efficiently swept under the rug.

Toxicology Report

The toxicology report was remarkable for the presence of anti-anxiety and antihistamine medications.

Nordiazepam is a member of the Valium family. It is prescribed for agitation, seizures and anxiety because of its CNS-depressant activity.

Oxazepam (Serax) is also used for short-term anxiety symptom relief. Temazepam is used in the short-term relief of insomnia. Alcohol is noted to greatly enhance the activity of benzodiazepines.

The forum at ei-resource.org²⁰ provides insight into how anti-anxiety medication can be beneficial, especially when coping with setbacks or disappointments following chemical exposures. Problems quickly appear related to intolerance to the medication itself, or the binders and fillers present in the compounds, precluding long-term use for most MCS patients.

ClassicalGirl posts:

"I took benzos to **calm my central nervous system**, to help me eat, to stop my muscles from spasming, and to **help me tolerate chemicals**. However the benzos are now causing **severe side effects** in my system and **making my reactions worse** but I don't have any medicine to replace them with."

"I take klonopin, soma, and valium. If I try to stop them, I get severe withdrawal with almost causes me to die from MCS symptoms, but **when I take them, they are so toxic that they make MCS worse as well**. These medicines were NOT miracle workers, but they **helped me get by during bad episodes** of throat closing, inability to eat, and nervous system overloads. Any ideas? I wish I had never begun these medicines in the first place but they helped me get by for about a year!"

Site Administrator Maff wrote back,

"I wanted to let you know **when my reactions were at their worst**, I too **found relief in benzodiazepines - diazepam (Valium) and clonazepam (Klonopin)**. I am lucky enough to have been fully 'recovered' from MCS for almost 12 years now but the benzos helped 'calm' my reactions when I was 21/22 and they had become so severe I had to leave home and **live like a hermit** in social housing."

"My symptoms were a little different to yours, in that they were all **strictly neurological**, without any obvious airway constriction or respiratory symptoms. The collection of symptoms was however very clearly defined and very **obviously triggered by chemical exposure** i.e. what we know as **multiple chemical sensitivity (MCS)**."

²⁰ [ei-resource mcs-and-benzodiazapine-medicines](http://ei-resource.org/mcs-and-benzodiazapine-medicines)

"Like you, it seemed to me at the time that benzos were an obvious treatment, since the leading theory of MCS etiology involved (and still does) the process of 'limbic kindling', or hypersensitivity of the limbic region of the brain, to volatile organic compound (VOC) exposure. Benzos produce their calming effects on the CNS by amplifying the action of the most abundant inhibitory neurotransmitter - GABA. It is only logical that if MCS involves too much excitatory neurotransmitter activity, then drugs like benzos which enhance the action of the main inhibitory neurotransmitter, will be an effective treatment for acute reactions and bring symptom relief. *Others have posted here in the past reporting that anti-epileptic drugs (AEDs) - one example being Gabapentin - have also been a huge help in managing their MCS symptoms; also logical since seizures and epilepsy are also a result of limbic kindling.*"

The toxicology report also listed Chlorpheniramine (Chlor-Trimeton) as present in the peripheral blood sample.

The report describes Chlorpheniramine as:

"a **potent antihistamine** that has been used alone and in combination with other cold symptom relief medications, both prescribed and sold over-the-counter. The blood to plasma ratio of chlorpheniramine is approximately 1.2."

"Common adverse effects include sedation, dizziness, nausea and dry mouth. Signs and symptoms of acute chlorpheniramine toxicity include tremor, seizures, disorientation, loss of consciousness, fever, respiratory depression and cardiac arrhythmias."

The most likely explanation for why it was present was that Mr. Paddock knew he would be symptomatic from exposure to chemicals in the casino hotel.

There is no indication whatsoever that Mr. Paddock "snapped." What he did required months of planning and days of substantial directed activity. It was not a sudden, spur of the moment act. However, it should be noted that suicidal ideation is found among people who take Chlorpheniramine maleate.²¹

Suicidal ideation is found among people who take Chlorpheniramine maleate, **especially for people who are female, 40-49 old also take medication Diazepam, and have Depression.** This review analyzes which people have Suicidal ideation with Chlorpheniramine maleate. It is created by eHealthMe based on reports of 3,101 people who have side effects when taking Chlorpheniramine maleate from FDA, and is updated regularly.

Impact on Mr. Paddock's lifestyle.

Considering the stage of disease progression that Mr. Paddock had obtained, it was obvious that he could no longer tolerate the casino environment. Gambling was his chosen profession. He was no longer able to concentrate enough while sitting in the casino to effectively calculate the odds and he was hemorrhaging money.

His only choice was to leave the casinos and all their enticing glitz and glamor behind. He faced the prospect of isolation from society, with no challenge for his over-active mental faculties. Stephen Paddock would have had a tremendously hard time accepting his destined fate.

Snowflake, Arizona is home to a colony of about thirty people who are "allergic to life."

²¹ [ehealthme chlorpheniramine-maleate suicidal-ideation](#)

Susie Molloy is the unofficial "mayor." In 2016 she hosted a reporter and photographer from the Guardian and showed them how sensitives live, in an enclave they managed to carve out for themselves.²²

"Over and over again, residents emphasized to me that **they wanted to work**, they missed working – **they had no identity now**, they said, **no sense of self worth**. Many, like Deb, were former chemical engineers. They were smart, easily bored, and embarrassed by what they worried some might misconstrue as laziness, or mooching. I believed them when they said they wanted jobs. I also believed that they were far too sick to work. Many spent entire days in bed, eyes cinched against the blinding pain caused by their illness."

"'People here **suicide themselves**,' Susie said, as we trudged around the desert, collecting rocks. Our boots crunched on petrified rabbit shit. Susie told us about a friend with environmental illness who had killed himself a few months prior."

"'He wasn't depressed or anything, **he just couldn't take it anymore**, so he starved himself,' she said. **Apparently it was common**, around Snowflake, for people to kill themselves. Susie estimated that it happened around twice a year, which, given the shifting population, I pointed out as an epidemic."

"'We bury our own dead,' she said."

"Many of the people we met had finally found doctors who believed them. **Before, in the regular world, after enduring years of humiliating check-ups and stints in the emergency room, they relegated the medical profession to enemy status**. Now, they spoke adoringly of their physicians, most of whom practiced integrative health – a blend of western science, holistic healing and one-on-one therapy."

"As long as I framed environmental illness as a physical phenomenon, Snowflakers were happy, even eager, to communicate. But they got angry if I broached their illness, even obliquely, as a psychological phenomenon. They had spent years feeling sick and battling skeptics. The last thing they wanted was to be told by an outsider, who had just met them, that they were crazy."

Stephen Paddock was also sensitive about discussing "bipolar" disease as a possible cause of his symptoms.

Casino Connection

There are many inconsistencies which need to be explored further.

Mr. Paddock had an advantage that most chemical hypersensitives do not. He had sufficient resources to hire attorneys to litigate his requests for "reasonable accommodation" under the Americans with Disabilities Act.

It is crucial to learn if Mr. Paddock attempted to retain counsel on his behalf. At this time there is no indication he did, or of why he specifically chose not to pursue litigation.

The reason the issue of disability accommodation is significant is because had Mr. Paddock been publicly validated by successfully obtaining accommodations, the casino industry, and all other hospitality based businesses, would suddenly be forced to accommodate 15% of their patrons the same way.

The casinos would face an additional public relations nightmare.

²² Hale, K. [Allergic to life: the Arizona residents 'sensitive to the whole world'](#) July 11, 2016

It would become public knowledge that by simply choosing to use certain types of entirely legal cleaning chemicals and fragrances, a significant percentage of casino patrons are disadvantaged through mental confusion.

Those affected would typically be unaware that symptoms affecting their thinking can be directly linked to airborne chemicals in the casino environment.

15/100 individuals in the general public are adversely affected by chemicals.

4/100 individuals in the general public are disabled by chemicals. All would be well aware of the symptoms to expect if they visited a casino.

Out of 100 people in the general public predisposed to want to visit a casino and gamble, 4 would choose not to visit because of their sensitivities.

Since 4 of the 15 would opt out, 11/96 potential visitors, or 11.458% of those actually visiting casinos, would be adversely affected, in ways that could contribute to gambling losses through inattention or inability to concentrate, think and focus.

Due to the nature of the condition, those who actually patronize casinos, that are affected, would likely be unaware of any connection between physical symptoms they experience and chemicals in the casino environment.

Those in stage 0 are indistinguishable from those totally unaffected and do not count in the 15% statistic.

Those in stage 1 are included in the 15% who experience symptoms. Even though they have symptoms, these individuals rarely associate the symptoms they experience with specific airborne chemicals.

Symptoms are often mistaken for allergies, flu, fibromyalgia, chronic fatigue, even tiredness or over-excitement. Even when they make the association, the level of impact is more of an “annoyance” than a disability.

Due to a feature of MCS referred to as “masking” those in this stage may experience more significant disruption to multiple body systems, especially central nervous system disruption than they are aware of.

This happens because of a “tolerance” that develops under ongoing exposure. For example, if your smoke detector goes off because you were cooking bacon, you wouldn’t know about the fire in the trash can.

After a period of avoidance and detoxification, masking effects are removed and symptoms quickly become associated with individual exposures.

In my opinion, Stephen Paddock had recently reached the top end of this range. He was aware that his environment was causing physical symptoms which were only getting worse day by day.

Those in stage 2 and 3 would be included in the 4% “disabled” by the condition. There are two types of “disabilities” that affect hypersensitives in different ways, direct effects of exposures are one set of challenges. Acute symptoms and their effects.

Every exposure causes acute symptoms which are often temporarily disabling for days or weeks at a time.

Once exposures are eliminated, the second form of disabilities are related to the inability to access services and interact socially.

Physical symptoms go into remission but due to the rigorous avoidance required, MCS patients are often unable to obtain even basic health care or trauma care due to contaminants in the environment.

Attending churches and family functions are totally out of the question.

Conclusions

There is more than sufficient anecdotal evidence to declare conclusively that Stephen Paddock suffered from the condition commonly referred to as Multiple Chemical Sensitivity.

The brain autopsy conducted at Stanford University provides the "icing on the cake" in the form of expected MCS biomarkers.

As with the grief process that terminal illness patients undergo, Mr. Paddock could no longer deny that his preferred environment, casinos, were adversely affecting his general health. More importantly it was affecting his ability to think and concentrate which was becoming increasingly expensive.

It seems that before he could reach the stage of acceptance and coping, he tragically ended the lives of 58 people besides himself in what appears to be an extreme temper tantrum.

At least one accommodation was granted by at least one of the casino hotels he frequented. Further investigation into this aspect is indicated.

Investigators appear to have been alerted to look for some medical/psychological condition as indicated by the search warrants, statements made by Sheriff Lombardo, and interviews with his primary care physician.

The most striking evidence investigators were looking for something specific is the fact that the brain was atypically sent to Stanford for in-depth analysis.

Despite all this interest in a medical connection, Sheriff's investigators have been strangely reluctant to discuss Mr. Paddock's medical history.

Despite obvious indications to the contrary, Sheriff Lombardo continues to declare that they have no idea why Mr. Paddock did what he did, or why they think his medical history may be significant.

_____/s/
Mark R. Megahan