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Substitute Addictions: "Catching the Animagi and Throwing Away the Metamorphmagi"

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*"Not much hair. It looked black when he was born, but I swear it's turned ginger in the hour since. Probably blonde by the time I got back."*Andromeda says Tonk's hair started changing color the day that she was born.

Remus Lupin on his infant son's metamorphic abilities.

Readers familiar with J.K Rowling's Harry Potter fantasy novels will recognize "Metamorphmagi" as being a witch or wizard with the ability to change his or her physical appearance at will rather than requiring Polyjuice potion or a spell like the rest of the wizarding population. Similarly, Animagi also transform at will, but only into one animal form which is determined by their inner traits. (http://harrypotter.wikia.com/wiki/Metamorphmagus).

The analogy drawn here, and the aim of the article, is to emphasize the clinical observation of metamorphosis of addictions i.e. the apparent remission from use of a substance and migration to another substance or a behavioral addiction. This is also referred to as substitute or cross addiction.

It is ironic that very little attention is paid to this phenomenon when, arguably, the word substitution is used to describe the most successful intervention in addiction medicine i.e. opioid substitution therapy or OST.

This substitution is often missed in follow up of patients' recovery journey by addiction treatment services. Most, if not all, commonly used outcome tools are not designed to detect it neither are routine aftercare assessment processes. For example the Addiction severity Index or ASI , the TOP or Treatment Outcome Profile, and the ASSIST, all do not have items checking for substitution.(McLellan, Lewis, O'Brien & Kleber, 2006; Marsden et al., 2008; W.H.O, 2002).

Search engines like Google Scholar and Medline return only few results of articles dealing with the subject.

The Metamorphmagi or Substitute Addictions

The phenomenon refers to any addictive behavior that serves at least one key function previously achieved by another addictive behavior (e.g., relaxation, escape, excitement, pleasure, reduction of negative affect, social lubrication; e.g. Zweben, 1987). It describes situations in which people substitute one form of addiction with another during recovery. This may involve substituting drug for drug, drug for behavior or vice versa, or behavior for a behavioral addiction. Examples include Benzodiazepine substituting alcohol, overeating for smoking, exercise for gambling, sex for opioid addiction, and so on. Last year a group from Columbia University and the New York Psychiatric institute published the first epidemiological survey that examined whether remission from one SUD predicts new onset of another SUD (Blanco et al., 2014). Despite the authors' assertion that it did not predict such a change, they concede in the limitation the following: they relied on self-reporting by patients, no urinalysis was done and short follow up period.

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What they did not concede was the omission of substitution to behavioral or process addictions. This is surprising given the well-established evidence of involvement of the dopaminergic neurons in the mesocorticolimbic reward system of the brain (ventral tegmental area via Nucleus accumbens) in both SUDs and process addictions, leading to the assumption that the same mechanisms involved in substituting drug for drug may be involved in substituting behavior for drug. Despite these, limitations they found one fifth of the nationally representative sample of 34653 adults from the National Epidemiologic Survey on Alcohol and Related Conditions in the US, approximately one-fifth (n=2741) of the total sample had developed a new-onset SUD at the wave 2 assessment. To me this proves the point, rather than refute it.

An addiction treatment specialist assesses patients presenting with addictive disorders (Substance use disorders or SUDs) or behavioral addictions (the latter term includes only gambling disorder in the DSM-5 and does not include internet gaming disorder , which is included in section III of the manual, where disorders listed need further research before consideration as formal disorder. (DSM-5, 2013).

Clinical Perspectives

If we consider opiate dependent patients, we assess and manage them according to best practice guidelines and if feasible maintain them on either Methadone maintenance treatment, MMT or Suboxone maintenance , SMT. Concurrently we add psychosocial interventions whether motivational enhancement, relapse prevention or contingency management as a gold standard and certainly manage comorbid psychiatric disorders. A successful outcome or recovery / remission is usually measured by their functioning and abstinence from opioids use. The same example applies to alcohol, cannabis, nicotine and other substances, where specific approved medications and interventions are used and outcome is measured. Chronicity is well established and relapse rates of 40-60% are accepted (McLellan, Lewis, O'Brien & Kleber, 2000). What are not measured by the commonly used scales are the substitute addictions, which would consume a considerable proportion of addictions in the general population. Consider this; Data from 83 studies showed overall 12-month prevalence of an addiction among U.S. adults varies from 15% to 61%. (Sussman, Lisha & Griffiths, 2011) assert that it is most plausible that 47% of the U.S. adult population suffers from maladaptive signs of an addictive disorder over a 12-month period and that it may be useful to think of addictions as due to problems of lifestyle as well as to person-level factors.

During follow up of some patients I considered great success; two had substituted their opiate addiction. The first, to the suffering of his family, substituted with sex addiction (a negative addiction) and a chain of extramarital relationships, unfortunately leading to the end of the marriage .The other substituted with a positive one, becoming a pigeon-keeper or *fancier.* His family describes total preoccupation and a remarkable change of personality and did not mind it since it kept him away from drugs. Of course this is not classified as an addiction but the reader gets the point.

Global examples exist of mass migration to a new substance either to obtain the same class effect e.g. prescription opioids to substitute heroin addiction or replace their addiction with another class altogether. This happened in the Middle East when use of Tramadol, a synthetic opioid analgesic became an epidemic when authorities enforced strict measures on opioid prescription drugs. Another example is the Thai experience when the government persecuted heroin users killing 2800 people and ending with an unprecedented rise in the use of alcohol and methamphetamine. (Human rights watch, 2004).

The surge in obesity worldwide may tempt some to seek hasty remedies in order to lose weight. This may involve medication or other measures like bariatric surgery. A good assessment is always mandatory, as clinicians are observing substitution of food addiction among a few with an SUD. Religious zeal and fanaticism is another peril either end of the metamorphosis and should not be confused with the desired refuge and positive energy of spirituality.

To conclude, appearances can be very deceptive and the metamorphosis of addiction into other forms may go unnoticed, warranting scrutiny at the following levels:

The patient/service user and their families: increasing awareness of the condition and educating them of the importance of seeking help if there are concerns about substitution. (Sussman & Black, 2008). It is important to communicate clearly that many patients recover without substituting and that we know very little about this phenomenon.

The services: training specialist with emphasis on prevention, detection and management of the problem.

Research: more research is needed to guide prevention and treatment and tools measuring progress and recovery should include items that address this issue and give it the weight it deserves.

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