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Steroid Psychosis, History of Corticosteroid Use and Associated Side Effects: Implications for Rehabilitation Counselors

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STEROID PSYCHOSIS, HISTORY OF CORTICOSTEROID USE AND ASSOCIATED
SIDE EFFECTS: IMPLICATIONS FOR REHABILITATION COUNSELORS

BY

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B.S. University of Wisconsin, Stout, 2011

A Research Paper
Submitted in Partial Fulfillment of the Requirements for the
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Masters of Science

In the Field of Rehabilitation Administration and Counseling

Approved by:

Dr. Thomas Upton, Graduate School

Southern Illinois University

Carbondale Illinois

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AN ABSTRACT FOR THE RESEARCH

PAPER

MARK E YASAITIS, for the Masters of Science Degree in Rehabilitation Administration and Counseling, presented October 20, 2015, at Southern Illinois University, Carbondale, Illinois.

TITLE: STEROID PSYCHOSIS, THE HISTORY OF CORTICOSTEROID USE AND ASSOCIATED SIDE EFFECTS: IMPLICATIONS FOR REHABILITATION COUNSELORS

MAJOR PROFESSOR: Dr. Thomas Upton

Throughout the medical community, corticosteroid medications are widely used for the treatment of ailments ranging from inflammatory disorders such as arthritic conditions and spinal cord injuries, to skin conditions such as eczema and psoriasis. Additional conditions could also include such disorders as inflammatory bowel disease. Also associated with corticosteroid treatments is the anabolic steroid family. These types of steroids are most commonly used for the enhancement of human tissues such as muscle growth associates with athletes referred to as performance enhancing drugs. Additionally, the use of diuretics, predominately in women, have a base of some type of steroid. For the users of corticosteroids and anabolic steroids, there is the danger of associated conditions known as neuropsychiatric psychosis, or steroid psychosis. Although in most cases, the cessation of the steroid use or even tapering the use can reverse the condition. There is approximately 7% to 10% of cases that the psychosis becomes a permanent condition. In many cases the psychosis goes un-diagnosed due to the mimicking of various mental illnesses such as Bi-polar disorder, Mood disorders, and even Schizophrenia. The need for careful monitoring of the administration of these medications as well as tracking of medical History while treating suspected mental illness are imperative to early identification of steroid

psychosis as well as the rapid and effective treatment of said condition. The purpose of this paper is to raise awareness with rehabilitation counselors that due to the treatment of some clients with steroid medications could be the cause of symptoms similar to those conditions previously mentioned. The steroid condition can be reduced or eliminated through medication management which very well may reduce the time needed for treatment. The implications for the rehabilitation counselor could be the shortened treatment time, adjustments to the treatment plan as well and identifying the condition to the client so the client will have a clearer understanding of their condition. An additional implication for the counselor will be that it is prudent to always review all available medical history information for each client to be aware of all the medications or medical procedures that may have been conducted in the client's history.

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CHAPTER I

Introduction

Currently there are nearly 200 approved steroid medications which are legally approved for human consumption. There are many documented cases where the use of corticosteroids has been the cause of psychotic conditions. It is estimated that approximately three billion dollars a year are spent in the treatment of adverse drug reactions in the United States each year and between 18% and 30% of patients who are hospitalized for any type of medical reasons will experience a significant reaction during their hospital stay (Hall, 2012). It has been indicated that approximately 5% of all hospital deaths are attributed to adverse drug reactions (Hall, 2012). The purpose of this paper is to discuss the use of, and the side effects related to corticosteroid medications and their implications in the field of rehabilitation counseling. Steroid Psychosis is a direct neuropsychiatric condition directly associated with the use of corticosteroid medications. The side effects of corticosteroid use, especially in diagnosed neuropsychiatric conditions can become quite severe and debilitating to clients seeking services with the rehabilitation setting and therefore should be accurately and quickly identified as a possible reason for the psychotic behaviors. Through careful examination of a client's medical history at time of intake, long term or excessive treatments can be avoided and a client may be returned to a quality of life to which they are entitled too. There is also considerable cost savings in treatment if this condition is identified early and steps taken to lessen or eliminate the condition early in the treatment proves.

Background and Problem

Corticosteroids are currently used in the treatment of a variety of physical ailments. These types of steroids are most useful in the capacity for the immunosuppressant factors as well as anti-inflammatory properties. Illnesses such as allergies, asthma, chronic obstructive pulmonary

disease, arthritis, systemic lupus erythematosus, as well as inflammation from various traumas due to accident or injury. Various steroids are also used to combat rejection of transplanted organs and tissues in the human body. From the use of corticosteroid medications, psychotic episodes, some cases similar to serious mental illnesses such as schizophrenia, bi-polar disorder, and other personality disorders have been observed. One of the first comprehensive studies of the side effects of corticosteroid use was conducted by Dr. Richard C.W. Hall, medical director of psychiatric programs at the University of Florida, Gainesville. This report defined the symptoms of steroid psychosis in 14 patient's receiving dosages of 40mg of Prednisone or equivalent medications were at greater risk of developing the condition of steroid psychosis (Hall, 2012). From these 14 patients the most prevalent symptoms noted consisted of emotional liabilities, distractibility, both visual and auditory hallucinations, mutism, delusions and hypomania. As Hall stated in the article, the incidence of psychosis from differing articles published after his original study indicated a range from 13% to 62% with the average of 27.6% (Hall, 2012) Continuing in this article was a statement from the Boston Collaborative Drug Surveillance Study, when patients receive doses of Prednisone at the 40mg level experienced a psychosis at the rate of 1.3% and when that dosage was increased to 41mg to 80mg range the incidence of psychosis rose to 4.6% (Hall, 2012). From these figures as well as counseling experience, indicates that the need to more thorough in data collection of medical histories of any client that may have recently been treated for any medical condition which involved the use of corticosteroid medications. Having such information at initial intake would negate the need for long term treatment plans, resulting in a quicker and more efficient and effective short term treatment plan that would reduce needless expenditures of limited resources. The basis for this paper comes from the experience of counseling a client while performing practicum and

internship as a graduate student with a community health care organization in Southern Illinois. To further explain the basis for this research paper, a case study follows which describes the client mentioned.

Case Study

In the early day of a practicum experience with a community mental health care center in Southern Illinois, a client came in for intake services after being referred by his attending medical physician. The client is a 34 year old white male who from all indications is in good physical condition other than an ongoing lower back pain condition. The client was accepted for services and his complete medical history was forwarded to the center. The client had previously worked as a deck hand aboard one of the large river barge craft up the Mississippi and Ohio rivers. During one of the cruises, he sustained a lower back injury when one of the large tie cable ropes used to hold the barges together for the river journey snapped striking him and throwing him to the deck. He was put ashore at a hospital in Tennessee where it was determined that due to the back injury he would need a regime of treatments to relieve the inflammation in the affected area, specifically the lower back. The client returned to work approximately one month after the accident. The client stated during counseling that it was shortly after returning to work he began to experience mild hallucinations and delusional episodes. At first it was seeing shadows where none should be and hearing faint voices. At first the client was able to function near normally, passing off these occurrences as nothing really to be concerned with. As the days passed these occurrences began to become more numerous and more severe in nature. Soon the client reported that the voices began to be more intense. The voices were telling him that others were out to get him and everyone was watching him. The client stated that he began to feel more and more paranoid that his fellow workers were doing all they could to cause him further injury.

He stated that he also began to see vague unrecognizable figures passing him and he found he was having more difficulty concentrating on his job.

After about a month back at work, the barge he was working on was passing Nashville Tennessee when he began to suffer a rather severe psychotic episode, so severe that the ship's captain halted the tow and called ashore for an ambulance to come to the dock to take the client to the hospital. The client had only vague memories of this incident but stated that he was unable to speak in anything but nonsensical phrases and he was told later that he was screaming that he felt he was under some sort of attack from the other workers on the barge. He was placed under involuntary commitment to the psychiatric ward at a Nashville hospital. The client was kept in the hospital for 30 days and was aggressively treated with a battery of anti-psychotic medications and upon release returned home and was not able to return to work and was diagnosed with schizophrenia. The symptoms of schizophrenia continued after returning home even with the medications prescribed. Due to the nature of the mental illness diagnosis, the client was not able to obtain workers compensation but did have a short term medical insurance benefit from his employer. This was the main reason that he was referred to the community mental health center for additional services. After the client intake, he began twice weekly individual counseling. Early on in the counseling process, it was determined that although the client had always been a quiet and for the most part, a very solitary person, there was no history or symptoms of schizophrenia indicated prior to the injury to his back and the subsequent corticosteroid treatments. It was this fact that led to doing research on the part of the counselor to answer some questions that arose from the example of counseling this client. After some brief online research, it was discovered that steroid use can indeed cause psychotic behaviors.

Although it was discussed with the centers attending psychiatrist about the possibility of steroid psychosis, the client diagnosis of schizophrenia was never changed. It was from this case that this paper and its topic was decided on. The client did continue twice monthly counseling sessions and continued medical interventions, was able to achieve a somewhat stable condition. The client did apply for and was awarded social security disability benefits. At the last meeting between the client and counselor, the client stated that he was still experiencing some episodes of hearing voices, but understood that they are not real and when necessary, he will seclude himself until the episode passes. As of the last contact, the client was stable at the level described.

What are Corticosteroids?

In understanding the broader field of corticosteroid medications, an explanation of their use is needed. Steroids are a naturally produced hormonal substance which is critical for the effective and efficient operations of the human body. The three important bodily functions that these hormones control within the human body are when stressed, illness or injury is sustained, to bolster the immune system, and to combat inflammation. They come in to forms, corticosteroids and anabolic steroids. Corticosteroids are those produced in the human body to control inflammation, where anabolic steroids are those use to regulate the growth of tissues. It is when these naturally produced steroids are not of sufficient amounts that the need to introduce to the body synthetic steroids may be prescribed. Synthetic steroids are very close copies of the natural hormones which are produced by the adrenal glands. Corticosteroids have been a treatment option since the late 1940's. The issue is that no matter how well a synthetic substance is produced, it still is not an exact copy of the substances produced by the human body. Whenever on of these substances is introduced into the body, the possibility of side effects is always present. The use of steroids in medicine is to either enhance those naturally produced, or to

substitute for lack of the body's natural production of these hormones is not present. One of the most common uses for corticosteroids is for the treatment of inflammation due to injury or surgical procedures. Other uses are for the treatment of conditions such as asthma and Lupus. In the case of arthritis, corticosteroids are used to treat the inflammation in the joints caused by the arthritis. Currently there are nearly 200 approved steroid medications on the market and in use around the world.

The other type of steroids, the anabolic steroids, are the ones most people recognize from news reports due to their overuse and or abuse by athletes attempting to enhance and improve physical performance. Anabolic steroids are used in cancer and AIDS treatments to bolster the body's ability to regenerate tissue. Anabolic steroids when used by healthy individuals can cause extreme weight loss, even to dangerous levels. This is the case with many of today's diuretics used by many women to control weight. On the other hand, these same steroids can contribute to abnormally fast weight gain or muscle mass gain. These conditions can and in some cases cause serious health risks or even death.

As with any medication, both corticosteroids and anabolic steroids can cause many side effects. These effects can range from mild reactions such as skin rashes, mild anxiety and headaches, body aches to much more severe effects such as increased blood pressure, loss of bone calcium contributing to osteoporosis, greatly reduced sexual drive and sterility. Anabolic steroids tend to produce the greatest level of side effects such as aggressive behaviors, violent behaviors towards oneself or to others, and even life threatening heart failure.

Corticosteroids have several methods of administration into the body. The most common of these is the oral application. This could be in the form of pills, capsules, tablets, or liquid form such as syrup. Oral applications are most commonly used for treatment of arthritic conditions,

chronic conditions, and Lupus. For asthma, the most common form of application is the inhalant. This is also the preferred method for the treatment of many allergies. For the treatment of skin conditions such as eczema or psoriasis, topical creams or ointments can be used.

At this point it is important to point out that the extensive discussion of most of the side effects of steroid use, it is mostly physical effects that are discussed in most publications, articles and journals. Yet it is the neuropsychiatric psychosis that can be every bit as devastating to a patient who has been treated with a regime of corticosteroid or anabolic steroid medications.

With the great amount of literature in print about the use of steroids and medical conditions they are used to treat, it is the physical side effects that seem to draw the majority of the studies. Yet the psychosis aspects of over use of steroids can and in many cases be even more debilitating to a patient in the short term. Although many studies have been done on these conditions, few if any have been of in-depth in nature. As was stated in many articles reviewed for this paper, many studies did not involve the use of test groups using a placebo and the only explanation for this fact was for ethical reasons, reasons that were not elaborated on (Dubovsky, 2012). In regards to the field of rehabilitation counseling and counseling of clients with mental illness, the possibility of steroid psychosis is a possible diagnosis that if applicable, should not be lightly dismissed.

Purpose and Objectives

The need for counselors to be aware of this condition becomes even more necessary when taken into consideration that the psychosis can be treated in most cases solely by tapering or discontinuation of the steroid medications. The need for careful identification of possible drug interactions and side effects can in some cases, lead to more accurate identification of possible neuropsychiatric illnesses which appear to me a mental illness when in some cases could quite

possibly be the cause of the medical intervention. Even with this possibility, these cases can still be best treated in a counseling realm with the same skills and techniques already being used by the counselor. The primary purpose of this particular research paper is to offer to the reader an additional possibility to help explain psychosis that does not fall within normally accepted psychiatric illnesses. The fact that most patients who experience neuropsychiatric psychosis can recover from this condition simply by having the steroid regime removed from the medical treatment plan, negates the long term counseling need, by, with perhaps 10% or such patients experiencing long term or even permanent psychosis, demonstrates that need for counselors and practitioners to understand the dynamics of this illness. To follow is a list of terms found in this paper that need to be defined.

Definitions of Terms Used

Psychosis: As defined, a severe mental disorder or illness in which thoughts and or emotions are so impaired that one's sense of contact with reality is severely compromised.

Tapering: This is the reduction of the dosage of a medication from a level where side effects are extreme to a level where those side effects are greatly reduced to manageable levels or eliminated. In most cases the tapering of medications is done incrementally and at a physician monitored rate.

Neuropsychiatric: This is the field of psychiatry related to mental or emotional disturbances to disordered brain functions.

Anabolic Steroids: Anyone of a group of synthetic steroid hormone compounds which resemble testosterone and promote the growth of muscle tissue in the human body.

Corticosteroid: These are a group of steroid hormones produced by the adrenal cortex of the brain or also steroids that are produced synthetically. They are used for many metabolic functions as well as treatment for many physical ailments and injuries.

Chronic Obstructive Pulmonary Disease: A progressive lung disease which causes reduced airflow in the lungs and characterized by shortness of breath, wheezing, difficulty exhaling and persistent cough.

Lupus: This is an inflammatory disease, also referred to Lupus Erythematosus, an autoimmune disease where the human immune system becomes hyperactive and attacks normal tissues either in the skin or the internal organs. The symptoms can vary greatly from one patient to the next.

Osteoporosis: A medical condition which causes the bones to become brittle and fragile. It is mostly related to changes in hormonal levels associated with aging. Causes are the loss of calcium or vitamin D deficiency.

Immunosuppressant: Medications in this category are involved with the reduction on the efficiency of the human immune system. The most radical use of this treatment in the suppression of the body's attempts to reject transplanted organs. They are also commonly used in the treatment of rheumatoid arthritis and Crohn's disease.

Mimicking: In the course of a disease or illness, ins the exhibition of symptoms that are deceptive and resemble those of another disease or illness.

Hallucinations: The experience of seeing something or someone this is not really there. Also referred to as an illusion.

Delusion: A belief or an impression firmly maintained by an individual that directly contradicts reality or rational thought.

Hypomania: A more mild form of mania. It is marked by a level of hyperactivity. Mania is an excessive and intense level of enthusiasm.

Adrenal Cortex: The outer parts of the adrenal gland that produces several steroid hormones in the human body, including cortisol and aldosterone.

Cortisone: Another one of the hormones produced by the adrenal cortex. One of the glucocorticoids. Has also been synthetically produced as one of the medications to control inflammation as well as an anti-allergy agent.

Glucocorticoid: Any of a group of corticosteroids that assist control of the body metabolism of carbohydrates, proteins, fats and also have a strong anti-inflammatory properties.

Adrenocorticotrophic Hormone: A polypeptide tropic hormone, produced and secreted by the anterior pituitary gland. Often produced in response to biological stress causing the increased production of cortisol. Conditions related to elevated levels of ACTH in the body are Cushing's disease and Cushing's syndrome.

CHAPTER II

Overview of Literature

Introduction

Psychosis has been identified as an adverse reaction to the use of corticosteroid use in the treatment of pain, inflammation and various chronic immune conditions (Wisegeek.com, 2014). From the use of such medications, usually of higher dosage, issues such as depression, anxiety or in many cases, hypomania can present in clients. The term psychosis comes from decades old literature referring back to studies of the “Heterogeneous mixture of neuropsychiatric effects, most of which do not involve psychosis” (Dubovsky, 2012, p 103). In more simple terms, the use of steroid psychosis throughout the years has added to some confusion amongst practitioners when referring to the effects and complications from the overuse of steroids on the neuropsychiatric condition. In the late 1940’s the chemical cortisol, also known as hydrocortisone, which is the principle glucocorticoid secreted by the human adrenal cortex, was first identified. The development of cortisone, a closely related substance to that produced by the adrenal cortex, was first administered in the late 1940’s to patients with rheumatoid arthritis. With the extremely effective nature of this new medication regime, cortisone, hydrocortisone, and even early synthetic glucocorticoids became the preferred treatment of choice for many chronic and acute disorders and diseases. Some of these diseases included cancers, inflammatory diseases, autoimmune disorders, and connective tissue ailments. They were also found to be quite effective in the treatment of asthma and allergic conditions. The method of administration of steroid based medications can either be by direct injection, intravenously, as an inhalant in cases of asthma or other breathing disorders as well as in time released pill form. Although there

are a host of possible physical side effects to the use of steroid treatments or steroid use in general, they are still widely prescribed.

Literature Review

The focus of this paper will be towards the psychological and psychosis effects of steroid use. For the most part, the physical side effects of steroid use have mostly overshadowed the neuropsychiatric effects of corticosteroid use. There is a host of side effects that have been documented from the use of steroid medications. Side effects such as depression, mania, agitation, mood abnormalities, anxiety, insomnia, catatonia, depersonalization, delirium, dementia and general psychosis. It is generally thought that these side effects may not get the attention that somatic symptoms do for the fact that they are more difficult to diagnose, are more complex as well as being of behavioral in nature. In many cases, other more established cognitive disorders are seen as the cause of these symptoms and no checks are made to past or current use of steroid based medications in the client's medical history. It was not until the 1950's that any real consideration was made toward these effects being a direct result of steroid use, It was noted in an article published in 1950 by Dr. E.W. Boland and N.E. Hadley entitled, Management of Rheumatoid Arthritis, that they defined four categories or grades of psychiatric responses in 20 patients receiving cortisone and ACHT (Adrenocorticotropic Hormone). Grade 1 is characterized by a general feeling of well-being and stimulation, with what was reported as improved concentration, energy levels, higher degrees of clarity of thoughts. Grade 2 was characterized by a more distinct elevated level in mood accompanied by increased restlessness, some insomnia, and an increase in motor activity, and accelerated mental activity bordering on flights of fancy.

Sixty percent of those in this study fell into the grades one and two. Of these, all were being administered cortisone and ACHT. Grade 3 is characterized by the manifestations of severe anxiety, ruminations, and obsessive behaviors. This was noted in 25% to 30% of patients. Patients in this group exhibited mood swings, lethargy, indifference, crying spells, hopelessness, helplessness, excitement, restlessness and increased flights of ideas. The fourth grade was characterized by hallucinations, delusions, and extreme variations in mood. A further 10% of the patients of this study fell into this fourth grade.

It is important to note at this point and time, the results of this study have been repeated in additional research activities, but it is safe to surmise that with the greatly increased use of these same corticosteroid medications in the past three to four decades, which these same conditions still exist and may have even grown in proportion. More recent reports and articles have noted that with the growing steroid use there not only still exists the noted side effects but also the possibility of a greater amount of side effects involving behavioral and cognitive changes experienced with those being treated with these medications (Dubovsky, 2012).

In a study by Lewis and Smith in 1983, they found that the most common psychiatric disorders were depression (35%), Mania (31%), Psychosis (14%), Delirium (13%), and mixed mental states (5%).

It is evident that the duration of treatment with corticosteroids is not exactly relevant as to whether a patient will experience some sort of cognitive deficit. Also it has been found that a history of mental illness does not necessarily indicate that a person with corticosteroid treatment will increase an already established cognitive disorder. In a study from 19789 by R.C.W. Hall and associates, Presentation of the Steroid Psychosis, 13 patients were followed through their treatment regime, 79% of the patients had noted distractibility, and 71% showed intermittent

memory impairment while 7% displayed persistent memory impairments. These numbers seem high when compared to a later study of 1500 individuals taking long term treatments of glucocorticoids, only 6 had symptoms of dementia, nonverbal memory, attention, and occupational performance deficits. In these cases the deficits were completely resolved within 3 to 11 months after the treatments were discontinued. Other clinical trials dating back to the 1950's have indicated a wide range, 2% to 60%, of patients developed some type of neuropsychiatric effects from the steroid use. What is interesting to point out at this point is that in almost all studies done to date, the controlled trials did not include a placebo test group for what the literature reviews stated was for ethical reasons, yet no attempt was made to clear up what was meant by ethical reasons.

Throughout the review of the literature used for researching this paper, it was well known that the use of corticosteroids has a direct relationship with increased levels of mood, behavior, and cognitive deficits. Even with the amount of studies conducted on this topic dating back over 60 years, very little is known at this time even just what the mechanism is in the relationship between these deficits and corticosteroid treatment really is. Corticosteroids act very much in the same manner as the internal release of hormones with the body. It is thought that the corticosteroids used for the treatment of ailments also effects the hippocampus. This is the area of the brain that regulates the processes of declarative memory and episodic memory. Also the amygdala as well as the hippocampus have the densest concentrations of glucocorticoid receptors in the brain which could also account for the greater uptake in the corticosteroid introduced into the body (Dubovsky, 2012). Steroid can either have an inhibitory effect or an excitatory action on the neurons of the brain. Both of these effects cause drastic changes in behavior, mood or cognitive deficits. Once a diagnosis is made and treatment instituted, the literature suggests that a

complete recovery is likely to occur in 90% of patients. Suicide has been documented in approximately 3% of cases. 5% to 7% of the remaining cases will have ongoing psychotic or depressive disorders or may develop recurrent psychiatric symptoms for perhaps a lifetime (Hall, 2012).

When steroid treatments are tapered, a recovery rate of 92% has been observed, and to those patients that continue steroid treatments but are treated with some type of anti-psychotic medications, recovery rates of 84% were observed.

It has been established that when considering gender and neuropsychiatric complications following the administration of steroid medications, women tend to experience deficits more readily due to the fact that ailments treated with steroids are more prevalent in women. Illnesses such as rheumatoid arthritis which is more common in women, steroid treatments are higher. In approximately 68% of cases involving steroid treatment, it is women that will suffer psychosis (Dubovsky, 2012).

With all the studies and research information, there still has been no clear evidence that having a history, whether with the individual or a family history of mental illness, could be a risk factor for the onset of neuropsychiatric effects from the use of steroids in the treatment of ailments or injuries. An additional point to be made at this point is that there has been no identified relationship between patients who have had a neuropsychiatric episode from steroid use having a greater risk of additional episodes with future steroid treatments. This point has been explored in depth and many of the resources used to prepare this paper suggest that further research on this point needs to be performed. When referring to age, although the elderly do have a higher predisposition to adverse drug reactions, there is no current clinical evidence to suggest that age is a factor in neuropsychiatric effects from steroid treatments, currently, there are no

Federal Drug Administration (FDA) approved medications for the treatment or management of corticosteroid induced neuropsychiatric effects.

Treatment Methodology

Continuing with the study of the researched articles for this paper, is the aspect of the treatment methodology. When a corticosteroid neuropsychiatric condition is identified the most prominent treatment is to discontinue the steroid medication. The administering of neuroleptic medications can also hasten the recovery from the psychosis. Other treatments such as Lithium and Electroconvulsive therapy have been shown to effectively treat the psychosis as well. Depending on the symptoms of the psychosis, anti-depressant medications, mood stabilizers, and anti-psychotic medications have also proven effective. Little research demonstrated how to treat or even prevent these types of neuropsychiatric difficulties. In many cases it has been reported that rapid improvements in these conditions is seen with the removal of steroid treatments. In some cases, simply reducing the dosage of the steroid medications can reverse the psychosis. Do to the limited available literature on the steroid psychosis condition, there is yet to be any uniformed management approach to remedy this condition (Flores, 2008).

Reducing the steroid medications, also known as tapering, can in many cases reduce or even eliminate the neuropsychiatric symptoms. If the symptoms are reduced but not curtailed in full, this is when it may become necessary to employ the medications listed earlier. In multiple articles, the drug Lithium shows the most popular medical intervention when steroid psychosis is indicated.

Also when considering treatment, there are other aspects of the patient's health history that needs to be addressed. In the October 2006 article written by T.P. Warrington and J.M. Bostwick, Psychiatric Adverse Effects of Corticosteroids, additional recommendations were as

follows: reducing environmental stimulation may be beneficial and asking patients families about the psychotic symptoms is important, as patients may be reluctant to reveal these symptoms. It is also suggested in many articles and journals that some sort of assessment for the risk of suicide attempts or ideations be conducted as well. This is evidenced when considering that upwards of 15% of patients identified with the symptoms of steroid psychosis have had suicidal ideations, as well as, in some reports, 8% to 12% have actually attempted suicides and in a study by Braunig et al., out of 150 patients in the study, 3 had actually committed suicide (Braunig, P).

As referring back to previous treatment aspects such as that of tapering, which is the directed and cautious reduction of steroid administration, it is noted that this process must be monitored by the attending physician to prevent or reduce the likelihood or the possibility of one or more symptoms of the psychosis reappearing closely associated with those symptoms first observed with the initial psychosis. Secondly, the possibility of acute adrenal insufficiency due to suppression by exogenous steroid production (Dubovsky, 2012). The third possible result from tapering of steroid medications too rapidly can include disturbances in appetite, difficulty sleeping (such as insomnia), fatigue, anxiety, depression, and difficulty with concentration, additional psychosis and even the possibility of suicidal ideations and attempts. There also can be physical symptoms such as fever, nausea, weakness, and possible skin irritations and rashes.

Counseling Implications

When considering mental health counseling for clients who may be suffering from the effects of steroid psychosis, it may not be known to the counselor or intake personnel that have not had access to full medical treatment records prior to the counseling effort. As stated previously, steroid psychosis can and does in most cases, mimic many of the symptoms of other established

mental illness, and in many cases these same individuals are indeed diagnosed with mental illnesses such as schizophrenia not knowing that the steroid type medical treatment was previously administered. The same counseling techniques and theories are equally effective to treat the psychosis. Also it is important to indicate that when there is a 3% to 10% of steroid psychosis cases, the symptoms will be permanent, established counseling practices are acceptable and effective. In the case where the psychosis has not been reduced or eliminated by tapering of the corticosteroid treatments, it should be noted by counselors that additional anxiety or depressive symptoms may emerge solely from the client's knowledge that they now do have a chronic long term neuropsychiatric issue and this needs to be addressed in their counseling treatment plan.

Summary

From the early 1940's the use of corticosteroids in the treatment of physical illnesses has been growing in the medical treatment regime. There has always been references to the physical side effects associated with the use of these medications. Beginning in the 1950's basic research began on the neuropsychiatric side effects on the use of steroids. Although more complete or complex research has not been prevalent in the neuropsychiatric aspects of steroid use, there is enough published information to warrant concern with it comes to the side effects of the psychiatric side of even basic steroid treatments. The medical benefits of corticosteroid medications is well documented, as with many medications, side effects are inherent. For the most part, reducing steroid usage, eliminating the steroids from a treatment regime can either alleviate or completely negate these side effects. When there are cases where steroid administration for treatment must be continued, there are options for the use of psychotropic medications that can reduce the neuropsychiatric psychosis. The key to successful treatment of

steroid induced psychosis is the early and precise diagnosis by the attending physician. Steroid induced psychosis is a medical based mental impairment issue and therefore is not identified in the Diagnostic and Statistical Manual for Mental Illness. It is most likely overlooked in the counseling realm during intake if the clients previous medical information does not indicate or the client is unaware that steroid use needs to be disclosed can at times cause confusion when preliminary diagnosis of mental illness is made. Even in this event, the counseling treatment plan for steroid psychosis would be very similar to treatment plans for the mental illnesses such as mood disorders, personality disorders, bi-polar disorder, schizophrenia, depression and mania.

Even though most patients who are identified as having steroid induced psychosis usually can expect to recover from this ailment in a relatively short period of time, there is still remains the 3% to 10% of those patients that the effects of steroid psychosis will become a permanent condition requiring long term mental health care services. Again, being that steroid induced psychosis has a medical cause, its association with psychiatric treatments is rather undocumented. None the less, steroid induced psychosis is a condition that could possibly arise in the counseling field.

CHAPTER III

Discussions and Implications

Introduction

Throughout the covered literature, the discussion of the side effects of corticosteroid use was predominately based on what could be considered quite basic research works and studies. Few if any detailed longitudinal studies have been conducted to date and the authors of several articles reviewed for this paper implied that these types of long term studies need to be done to move satisfactorily respond to the questions yet unanswered to date dealing with the accuracy of studies already published. Much of the research to date has concentrated on discussions of the physical side effects. Although there has been research done on the neuropsychiatric conditions experienced by individuals being administered corticosteroids, there is to date no longitudinal studies of long term effects of steroid psychosis. This could be due to the fact that most patients experience psychosis find the symptoms quickly wain with the reduction of the dosages of corticosteroids or termination of treatment. There is a great amount of publication available for review on this topic but it was found that most simply repeat what other earlier publications and articles have already said. There does seem to be a lack of long term longitudinal studies or any amount of follow-up research. The articles do clearly express that the conditions do exist, are treated with standard forms of medications, and that it has been an identified condition for nearly as long as the medical use of synthetic corticosteroids. It was mentioned many times that most studies that have been performed have not included any control groups being given placebos for a control test. Other than saying it was for ethical reasons, this was never found to be explained in more detail. The question arises with this point, why? What these ethical issues are or were, was never discussed or even stated. Could these ethical issues involve drug manufacturers?

Could they be associated with issues concerning the lack of communication or cooperation between medical models of treatment and the psychological models of treatment? These questions as well could be an opportunity for future research.

Continued Article Review and Consultation with the onsite Psychiatrist

Referring back to the case study used in this paper, as the counselor, I did discuss the possibility of steroid psychosis as a diagnosis with the centers attending psychiatrist. Even through the psychiatrist was very familiar with this condition, and also with the medical history of the client, he was adamant that in his opinion the client was not suffering from a permanent form of steroid psychosis and was not even a consideration. Since mental health clients suffering from steroid psychosis are most always treated with the same medications that are used in the treatment of mental illness, there seems to be no strong desire to continue more in-depth research studies. Since steroid treatment is very effective in the treatment of a great many medical conditions, it is perhaps somewhat accepted as a risk factor that some patients will experience psychosis. It is my hope with this research paper that a greater awareness on the part of counseling professionals and that they take the time and interest in learning not just about their clients current ailments but also to be cognizant and diligent in taking into consideration of not just the current condition of their clients but also the clients past medical history.

I had also hoped to find somewhere in the multitude of articles that were read for this paper, some reference to the possibility of a connection between steroid psychosis and the triggering of latent mental illnesses. As most understand in the field of rehabilitation, specifically psychiatric rehabilitation, there is with most mental illnesses a genetic component. It is believed in some areas of medical and brain research that most people have within their genetic makeup, a dormant gene that would predispose an individual to some type of mental illness. But for nearly

all people, that gene remains dormant until in some cases, something triggers that gene which in turn brings on the onset of mental illness. That trigger could be a traumatic life event, or perhaps some type of connection with substance abuse, or family history. Nowhere in any of the literature reviewed was this topic ever mentioned. Even though some studies did mention that family history of mental illness did not appear to be a factor in the development of steroid psychosis, this as well has not been aggressively researched. Also the Food and Drug Administration has not approved any specific treatment regime or medication for steroid psychosis. With synthetic corticosteroid production being a multi-billion dollar part of the major drug companies business, it is possible to assume that they themselves, attempt to soften the possible impact of further research might have on the overall steroid market.

Medical Model versus Psychological Model

As steroid psychosis is a medical based condition and is primarily treated with the medical model of treatment, it is currently not included in the Diagnostic and Statistical Manual of Mental Illness 4th or 5th editions. A suggestion would be to explore the possibility of adding this diagnosis to this manual as well as other psychiatric and psychological professional data bases. It is true to say that many persons who experience steroid psychosis may never see a counselor about the intellectual effects of this psychosis, due to the fact that most symptoms subside with the tapering or cessation of the steroid regime, there is still 7% to 10% of patients are found to have the psychosis become a permanent condition. There is still the need for counseling treatment options. It is reasonable to assume that the use of corticosteroid medications will remain a mainstay in the treatment of many different ailments and as medical testing technology and drug development continues to improve and expand, quite possibly more uses for corticosteroids will be found.

This too may also increase the numbers of patients that develop psychosis or even conditions not yet recognized. As with much in the realm of public health, continuing research and education, especially for those in many professions, including rehabilitation counseling, needs to be maintained at the highest level possible. Even though steroid psychosis is not normally a permanent condition there is a percentage of those with this mental illness that will be permanent, and it is these clients and patients that must have consideration when it comes to long term services. This must go hand in hand with being open minded to new research, new educational opportunities, openly discussing even the possibility of someone having this condition and not dismissing the possibility out of hand. Knowing a client's medical history, either through medical records, or discussing that history with the client and if need be with the client's family or primary care giver can answer a great many questions.

Continuing Research

As stated earlier, continuing research into long term effects of steroid psychosis could bring about more careful dosage recommendations for those prescribed corticosteroid medications. Perhaps instead of prescribing the higher dosage levels in the beginning and then finding the need to taper back medications after the psychosis occurs, starting out with lower dosages and taking the idea of what I would compare to the use of a CPAP machine for sleep Apnea, when first starting each night, the machine has a setting where the air volume starts out a low setting and slowly ramps up to its set limit, this could also be an alternative for steroid prescriptions starting out low and raising the dosage slowly as needed with close monitoring.

Implications for Rehabilitation Counselors

As steroid psychosis often mimics symptoms of other mental illnesses, the counseling processes used for these other illnesses are effective in practice with those with steroid

psychosis. But it must be known that there is the possibility that clients knowing that their condition was caused by medications could and in the example of my case study, cause additional stress, anxiety and even mistrust in the medical process that will also need to be addressed in the counseling process. In those cases where tapering of steroid medications is not feasible due to the needs of the treatment regime for certain physical ailments, counseling should be incorporated into the overall treatment plan. This as well could be a possible research opportunity to help develop new levels of cooperation between the medical side of the treatment plan and the psychological side. It could be researched in depth to find the best way in which this cooperation could be at its most effective. Historically these two disciplines have not always enjoyed the best cooperation, but that could be changed. For the final analysis, it is ultimately the well-being of the client that needs to be of paramount consideration. We can heal both the body, and we can heal the mind, but the best results will come when we can heal both together. A patient who knows and understands what is happening to them, and knows that everyone concerned in their care and treatment are working together will undoubtedly heal and recover faster with far better results.

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