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Review Article

Psycosis and Antipsycotic Drug- A Review

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Abstract:

Conventional antipsychotic drugs, used for a half century to treat a range of major psychiatric disorders, are being replaced in clinical practice by modern "atypical" antipsychotics, including aripiprazole, clozapine, olanzapine, quetiapine, risperidone and ziprasidone among others. As a class, the newer drugs have been promoted as being broadly clinically superior, but the evidence for this is problematic. In this brief critical overview, we consider the pharmacology, therapeutic effectiveness, tolerability, adverse effects and costs of individual modern agents versus older antipsychotic drugs. Because of typically minor differences between agents in clinical effectiveness and tolerability, and because of growing concerns about potential adverse long-term health consequences of some modern agents.

Keywords: Adherence, Antipsychotics, Attitude toward medication, Bipolar disorder, Schizophrenia, Substance abuse

Introduction

Psychosis is an amalgamation of psychological symptoms resulting in a loss of contact with reality. The current thinking is that although around 1.5 to 3.5% of people will meet diagnostic criteria for a psychotic disorder, a significantly larger, variable number will experience at least one psychotic symptom in their lifetime. Psychosis is a common feature to many psychiatric, neuropsychiatric, neurologic, neurodevelopmental, and medical conditions. It is the hallmark feature of schizophrenia spectrum and other psychotic disorders, a co-occurring aspect to many mood and substance use disorders as well as a challenging symptom to many neurologic and medical conditions. Psychosis can result in high levels of distress for patients and loved ones, which is why it has become a primary target of treatment for medical professionals.[1]

Types of Psychosis

1. Delusions are fixed, false beliefs for which a person lacks insight into, even in the face of evidence that proves contrary to their validity. A variety of different types of delusions exist. Persecutory delusions are the most common; this is where one believes someone or something is out to get.[2]

2. Hallucinations are perceived experiences in the absence of an external stimulus sufficient to evoke such experience. By definition, they are not under voluntary control. Hallucinations may occur under any sensory modality (visual, auditory, olfactory, gustatory, proprioceptive, tactile, etc.[3]
3. Disorganized thought usually gets illuminated through the patient's speech and general communication patterns. In a mental status examination, one should be able to say a person not suffering from a psychotic disorder exhibits a "logical" and "goal-directed" thought process. In psychosis, one can see loosened associations or sequences of unrelated or loosely related.[4] Disorganized behavior consists of a broad spectrum of faulty goal-directed activity, which will usually lead to a decline in daily functioning. In psychosis, it is common to see patients with unpredictable and/or inappropriate emotional.[5]

4. Spycosis/Mania

Bipolar psychosis; Psychosis is a symptom of a condition, not a disorder. People experiencing psychosis may have hallucinations or delusions.

Sometimes, a person with bipolar disorder may experience symptoms of psychosis. This often occurs during a severe episode of mania or depression.

While psychosis is often associated with mental health conditions like bipolar disorder or schizophrenia, it can occur due to other medical conditions and causes. Hallucinations and delusions can also be experienced as a result of.

- a brain tumor or cyst
- dementia, including Alzheimer's disease
- neurological conditions such as epilepsy, Parkinson's disease, and Huntington's disease
- HIV and other sexually transmitted infections that can affect the brain
- malaria
- multiple sclerosis (MS)
- a stroke.[6]

Complication

Self-harm: Self-harming behavior is a relatively common complication in people with psychosis. A study found 1 in 10 people with psychosis also had a history of self-har .The risk of self-harm is thought to be highest in people who are experiencing their first treatment

Suicide: People with psychosis also have an increased risk of suicide. It's estimated 1 in 5 people with psychosis will attempt suicide at some point in their life, and 1 in 25 people with psychosis will kill themselves.[7]

Treatment of Psychosis

Most psychotic disorders are treated with a combination of medications and psychotherapy, which is a type of counseling Medication: The main type of drug that doctors prescribe to treat psychotic disorders are "antipsychotics." Although these medicines aren't a cure, they are effective in managing the most troubling symptoms of psychotic disorders, such as delusions, hallucinations, and thinking problems.[8][9]

Older antipsychotics include:

- Chlorpromazine (Thorazine)
- Fluphenazine (Prolixin)
- Haloperidol (Haldol)
- Loxapine (Loxitane)
- Perphenazine (Trilafon)
- Thioridazine (Mellaril)

Newer "atypical antipsychotics" include:

- Aripiprazole (Abilify)
- Asenapine (Saphris)
- Brexpiprazole (Rexulti).[10]

Herbal Treatment for Antipsycotic Drug:

S.No.	Description of plant	Result and discussion
1.	Piperguineense Schum&Thonn (Piperaceae) Plant part used- Fruits	Leaf size was 10.3 cm ± 0.5 (length) and 6.0 cm ± 0.2 (breadth)Piper guineense is very similar to other species.[11]
2.	Lonchocarpus cyanescen(Schumach and Thonn.) Benth. Fabacea Plant part used- Leaves	AEF (100-400 mg/kg) significantly ($p<0.05$) suppressed stereotypy induced by APO (2 mg/kg.[12]
3.	Bacopa monniera (Linn.) (Scrophulariaceae) Plant part used -Whole plant	Preliminary t-tests showed no differences between the two groups at baseline on any measures psychological state (depression, anxiety and stress) or everyday memory function.[13]
4.	Tinospora cordifolia Plant part used-Leaves	at a dose level of 250 & 500 mg/kg showed no significant antipsychotic activity Results of DA-D_2 receptor binding studies indicate that Tinospora increases the DA-D_2 receptor.[14]
5.	Guierasenegalensis J.F.Gmel (Combretacea) Plant part used- Leaves	Most of these studies are reported from BurkinaFaso, Guinea, Mali, Nigeria, Senegal, and Sudan. [15]
6.	Mitragyna speciosa, (Rubiaceae) Plant part used- Leaves	its mechanism of action and the constituents that elicit these antidepressant, anxiolytic, and antipsychotic properties depression, anxiety, and psychosis, leading to the improvements of mental health conditions. [16]
7.	Viscum album L Plant part used-Leaf	The extract decreased the apomorphine-induced stereotyped behavior and potentiates the HAL-induced cataleptic score which suggests the extract possess antidopaminergic activity.[17]
8.	Noni (Morinda citrifolia Linn.) Plant part used- Fruits	The acute treatment of MMC (1, 3, 5, 10 g/kg, p.o) significantly decreased the apomorphine-induced cage climbing behaviour and climbing time in mice in a dose dependent manner.[18]
9.	Nauclea laltifolia Smith (Rubiaceae) Plant part used- Root bark	The main components detected in the extract belong to the class of indole alkaloidscharacteristicof Nauclea genus.Strictos amide, vincosamide and pumiloside were tentatively identified together with quinovic acid glycoside.[19]
10.	Newbouldia laevis Seem. (Bignoniaceae) Plant part used- Stem bark	the HBT, N. laevis (25 and 100 mg/kg) increased the number of sectional crossings significantly ($p < 0.05$). In the OFT, N. laevis (25–200 mg/kg) increased the number of general square crossings, centre square crossings, rearings and assisted rearings ($p < 0.05$). In the EPMT, the extract.[20]

11.	Panax quinquefolium Linn (Araliaceae) Plant part used-Leaves	The aromatic root of American ginseng (Panax quinquefolius) resembles a small parsnip that forks as it matures. The plant grows 6 to 18 in (15 to 46 cm) tall, usually bearing three leaves.[21]
12.	Viscum album Linn. (Lorantha-ceae) Plant part used-Leaves	In the present study sedative effect of Viscum album L. is evaluated by using a locomotor activity test. Locomotor activity is considered as an index of alertness and a decrease in it is indicative of sedative activity.[22]
13.	Terminaliamacroptera Guill.&Perr. (Combreta-ceae Plant part used-Leaves	A tree to about 13 m high, short bole, thick black, deeply fissured bark, of the savanna woodland usually in moist or occasionally flooded sites, occurring from Senegal to N and S Nigeria and across Africa to Sudan and in Ugand.[23]
14.	Synedrella nodiflora (Linn.) Gaertn (family Asteraceae) Plant part used-Leaves	The hexane, ethyl acetate, ethanol and water extracts of Synedrella nodiflora (L.) Gaertn. (Asteraceae) were assessed for their antibacterial and antioxidant capacities.[24]
15.	Spondias mombin Linn. (Anacar-diaceae) Plant part used-Leaves	The larvicidal activity of the extract and fractions from S. mombin was found to be mosquito species dependent and extract or fraction dependent. Exposure of Ae. aegypti, An. gambiae and Cx. quinquefasciatus IV instar larvae to S. mombin MCE and fractions showed.[25]
16.	Spinacia oleracea Linn Chenopo-diaceae Plant part used-Seeds	Thus Spinacia oleracea merits further phytochemical, pharmacological and clinical investigations for development of an effective natural remedy to provide therapeutically effective lead compounds .[26]
17.	Securinega virosa (Roxb ex. Willd) Baill. Plant part used-Bark	The yield of the extract and fractions A total of 1.5kg of the powdered sample of S. virosa yielded 156g of the extract, implying % 80 g of the partitioned extract gave 42 g (percent) and 23g(2.21 percent) of the aqueous and chloroform fractions, respectivel.[27]
18.	Saururus cernuus Linn. (Sauru-ruraceae Plant part used-Leaves	The alignment of 7 sequences resulted in a matrix of 2279 aligned positions, of which 195 were.[28]
19.	Picralima nitida Stampf Th. et H.Dur. (Apocynaceae) Plant part used-Fruit	According to the World Health Organization, more than 80% of the population in Africa uses traditional medicine to solve the primary health problems.[29]
20.	Abrus precatorius L. var. albo-spermum	Diagnosis: Abrus precatorius L. var. albo-

	Plant part used-Seeds	spermum Hassan, Rahman et Afroz, var. nov. is distinct by its entirely white seeds, gynoecium length which is half the length of the longer filaments and a short style.[30]
21.	Bidens pilosa L., Kashisha Asteraceae Plant part used-Seeds	B. pilosa is an erect, perennial plant with green leaves, white or yellow flowers and tiny black seeds. As it is distributed worldwide and is widely used as a folk remedy.[31]
22.	Sclerocarya birrea (A.Rich.) Hochst Plant part used- Fruit	Various human cultures have used medicinal plants for managing, controlling and/or treating a plethora of human and animal ailments.Various human cultures have used medicinal plants for managing, controlling and/or treating a plethora of human and animal ailments Various human cultures have used medicinal plants for managing, controlling and/or treating a plethora of human and animal ailments.[32]
23.	Centella asiatica. Linn Plant part used-Leave	Taproots are elongated, cylindrical, tapered towards the ends and brownish in color. T.S of the young roottaproots are elongated, cylindrical, tapered towards the ends and brownish in color. T.S of the young root brownish in color. T.S of the young roo Centella asiatica has been in use since times immemorial to treat wide range of indications. It has been subjected to quite extensive phytochemical, experimental and clinical investigations.[33]
24.	Momordica charantia Plant part used-Fruit	Momordica charantia is a plant of the Cucurbitaceae family is known as bitter melon, karela, and pare. Momordica charantia have provided many remedies for different diseases from ancient days to now .[34]
25.	Albizia inpina Leguminosae Plant part used-Leaves	Fabaceae or Leguminosae is a large and economically important family of flowering plants which is commonly known as the legume family, pea family, bean family or pulse family.[35]
26	Nardostachys jatamansi Plant part used-Root	Medicinal plants have been played a vital role in maintaining the health of the community since the ancient times. Nardostachys jatamansi; is one of the most commonly used medicinal herbs Medicinal plants have been played a vital role in

		maintaining the health of the community since the ancient times jatamansi is an important medicinal plant mentioned in Ayurveda and Unani system used for treatment of various diseases.[36]
27.	Withania somnifera Solanaceae Plant part used-Root	A shrubby, semi-woody, perennial herb to 1½ m high, of grassland and waste places; recorded only in Mali, Liberia and N Nigeria in the Region, but occurring more commonly across central Africa, E, NE, S central and southern Africa, and into India and SE A.[37]
28.	Afzelia africana Smith ex Pers. Family-Caesalpiniaceae Plant part used-Leaves	africana is a locally well-known tree described as a refuge of invisible spirits. Due to this mystery and its multipurpose uses, A. africana is conserved within the agroforestry systems. The species is widely and mostly used as fodder (87.55%), drugs (75.93%), fetish or sanctuary (70.95%), food (41.49%), and raw material for carpentry (36.19%) and construction (7.05%).[38]
29.	Salvia rosmarinus Spenn, Romarin Plant part used-Root	In Nigeria, it is called akpalata in Igbo, apa in Yoruba, yiase in Tiv, ukpo in Idoma and kawa in Hausa. Tender leaves and shoots of Afzelia africana are added in yam dishes and eaten as vegetables alone or mixed with ground cereals.[39]
30.	Lycopersicum esculentum Mill., Tomatoe Plant part used-Leaves	the duration of the phenological phases of tomato under light culture conditions. As a result of the cultivation of three superdeterminant varieties of tomato, the timing of the onset of the phases of budding, flowering, the beginning of fruit formation and the beginning of fruit ripening was determined.[40]

Conclusion

Plants have been used for the treatment of diseases all over the world since the beginning of civilization. There has been growing interest in the therapeutic use of plants because of their safety, economical, and effective use. In this review, some plants have been mentioned, which are previously explored by the various researchers for their antipsychotic activity. Collectively, behavioral studies of plants have created a unique opportunity for the development of new pharmacotherapies for psychosis. The herbal extracts and constituents with demonstrable psychotherapeutic effects in animal models may deserve further evaluation in clinical studies. Some dietary supplements such as antioxidant vitamins, EPA omega-3 fish oils also helps k.

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