Psychotic Disorders with a focus on Schizophrenia

John D. Ranseen, Ph.D.
Dept. of Psychiatry, 2/13/06
jranseen@uky.edu

Objectives

- Understand what is a psychotic illness
- Know the primary diagnostic criteria for:
  - Schizophrenia
  - Schizophrreniform psychosis
  - Schizoaffective disorder
  - Delusional disorder
  - Brief psychotic disorder
  - Other

Objectives (cont.)

- Understand basic information about schizophrenia
  - subtypes
  - suspected etiologies
  - prevalence
  - course of illness
  - treatment
- Understand differentiation between schizophrenia and other psychotic

Psychosis

- No single accepted definition
- Gross impairment in reality testing
- Delusions & prominent hallucinations
- Thought disorder, disorganized behavior
- Impairment of a severity to interfere with demands of ordinary life

Psychosis (cont.)

- Psychotic symptoms also seen in:
  - Many medical disorders (delirium/ dementia)
  - Substance abuse
  - Mood disorder (major dep / bipolar)
- For our purposes, we will focus on the psychoses unrelated to known medical illness, substance use, medication use, or mood disorder
Psychotic Disorders- overview
- Schizophrenia: Psychotic symptoms causing impairment that last for at least 6 months.
- Schizophreniform Disorder: Same as schizophrenia but lasts less than 6 mo.
- Brief Psychotic Disorder: Psychotic symptoms that last less than 1 month.
- Delusional Disorder: Primary symptoms of delusions without other psychotic

Overview (cont.)
- Schizoaffective Disorder: Mixture of psychosis and mood disturbance.
- Shared Psychotic Disorder (Folie a Deux): Shared delusional disorder between 2 or more people.
- Psychotic Disorder (NOS): When patient lacks the decency to fall nicely into a category.

Schizophrenia- A bit of history
- Hx of schizophrenia is the history of psychiatry.
- Eugen Bleuler (1857-1939): Coined the term schizophrenia= schism between thought, emotion & behavior.

Interjection
- Schizophrenia IS NOT a split or multiple personality

History (cont.)
- Bleuler's 4 'A's: Associational impairment, Affective disturbance, Autism, and Ambivalence
  - Ambivalence = occurrence of 2 opposite feelings
- Schneider: First and Second Rank Symptoms (symptoms of pragmatic value in diagnosing schizophrenia)

Schneider - 1st Rank Symptoms
- Audible thoughts
- Voices arguing or discussing or both
- Voices commenting
- Somatic passivity experiences – early stages
- Thought withdrawal & other experiences of influenced thought
- Thought broadcasting
- Delusional perceptions
History (cont.)
- Pre 1800s - where was it?
- 1900-1950: Etiology focused on psychosocial theories
  - Psychoanalytic: Freud= developmental fixations; regression in response to frustration and conflict; disintegration of the ego
  - Family Systems: Schizophrenic mothers; double bind

- 1950- present. Focus on biological theories.
  - Genetics
  - Diathesis-stress model (genetic vulnerability + stress= expression)
    - Neurotransmission:
      - Dopamine overactivity
      - Brain differences

Schizophrenia - Epidemiology
- Lifetime prevalence in U.S. 1.3% (studies vary from 1.1-1.5% (2-2.0%))
- Male: Female = 1:1 (but, different onset and course)
- Described in all cultures and socioeconomic groups
- Industrialized society - higher prevalence in lower SES (also in big cities)
- Downward drift vs. Social Causation

Epidemiology (cont.)
- Prevalence: increases with pop. density
- Seasonality of Birth: Increased risk
  - No. Hem.: January to April
  - So. Hem.: July to September
- Higher mortality rates for illness/accidents
- Suicide is quite common
  - 50% attempt
  - 10-15% suicide

Epidemiology (cont.)
- Homeless population: Estimates that 1/3 to 2/3 are schizophrenic
- 50% of mental health hospital beds
- 16% of psychiatric patients who receive treatment.

↑ Homeless population around mental health hospitals

General Course of Illness
- Usually begins during early adulthood (although in rare cases does begin in childhood)
- Men tend to show symptoms earlier than women
  - Peak age of onset for men: 15-25
  - Peak age of onset for women: 25-35

↑ Development normal up to this point
Onset (cont.)
- Typically begins insidiously during adolescence
  - Not functioning well at school or work
  - Become reclusive
  - Mood changes
  - Somatic focus
  - Odd thoughts/verbalizations
    - Intense religious preoccupation, philosophy, occult, abstract or unusual ideas
  - Poor hygiene, don't take care of self
  - Given a few months, might be diagnosed with depression

Course of illness (cont.)
- After break, often a period of recovery
- Can return to normal functioning
- Relapse (usually within 5 years)
- Further deterioration from baseline
- Recovery less complete following relapses
- Grows psychotic (positive symptoms lessen) but social debilitation increases

Course of illness (cont.)
- Typical course involves multiple hospitalizations, deterioration in social functioning, periods of depression, marginal existence.
- 40-60% remain significantly impaired (majority do not have a good outcome)
- 10-20% do have relatively good outcome and ability to function

Course of illness (cont.)
- Outcome dependent on many factors
  - Subtype of schizophrenia
  - Social support
  - Treatment
- Some schizophrenics ‘burn out’ and show relatively few symptoms in later age (e.g., John Nash; Not quite as beautiful a mind as the movie would have us believe)

Clinical Features/Symptoms
- No single symptom is diagnostic of schizophrenia
- Schizophrenics can look very different depending on the mix of symptoms
- Symptoms can change with time
- Sometimes there is a fine line between whether symptoms reflect reality or not
Symptoms: Hallucinations
- Any of 5 senses can be involved
- Auditory is most common
  - hearing voices that are threatening, accusatory or insulting
  - voices that provide running commentary
- Visual hallucinations also common
- Tactile, olfactory or gustatory not common

Symptoms: Thought
- Ideas, beliefs & interpretations unusual or idiosyncratic
- Delusions: persecutory, grandiose, religious, somatic
- Ideas of Reference: TV, newspaper, radio making reference to them
- Looseness of associations: tangential, derailment, circumstantial, word salad

Thought (cont.)
- Flight of ideas, thought blocking, echolalia, clang associations, neologisms
- Poverty of thought

Symptoms (cont.)
- Judgement/Insight: lacking (hence often poor compliance)
- Impulsive: often do things seemingly without thinking
- Suicide: possibly in response to hallucinations
- Homicide

Symptoms: Affect
- Flat, blunted, constricted
- Extremes (rage, euphoria, terror, paralyzing anxiety)
- Depression common
Symptoms: Behavior
- Bizarre postures
- Agitation
- Stupor (catatonia)
- Waxy flexibility (catatonia)
- Poor grooming, disheveled
- Tics, mannerisms, echopraxia - echo movements

Positive vs. Negative Symptoms
- Positive = excess, distortion of normal functioning
  - delusions, hallucinations, disorganized speech, disorganized behavior
- Negative = restrictions in the range & intensity of emotional expression, fluency/production of thought & speech, initiation of goal-directed activity.

Schizophrenia: Dx Criteria
- A: 2 or more of the following, each present for a significant portion of time during a 1-month period (less if successfully treated)
  - delusions, hallucinations, disorganized speech, disorganized/catatonic behavior, negative symptoms (flat affect, alogia, avolition)

Diagnosis (cont.)
- B: Social/occupational dysfunction. For a significant portion of time - disturbance in work, IP relations, or self-care.
- C: Duration. Continuous signs of the disturbance persist for at least 6 months (including 1 month of active-phase symptoms)

Diagnosis (cont.)
- D/E: Ruled out:
  - Schizoaffective disorder
  - Mood disorder
  - Substance abuse
  - General medical condition
  - Pervasive developmental disorder
  - e.g. prednisone can cause psychosis

Schizophrenia: Subtypes
- Paranoid
- Disorganized
- Catatonic
- Undifferentiated
- Residual
Paranoid subtype: Criteria
- Preoccupation with one or more delusions or frequent auditory hallucinations.
- None of the following is present:
  - disorganized speech
  - disorganized or catatonic behavior
  - flat or inappropriate affect
  - Can still carry on conversation

Paranoid subtype: features
- Tends to be associated with:
  - later onset
  - less cognitive (neuropsychological) impairment
  - generally better prognosis

Disorganized subtype: Criteria
- All the following are prominent
  - disorganized speech
  - disorganized behavior
  - flat or inappropriate affect
  - Criteria for catatonic schizophrenia are not met

Disorganized subtype: features
- Poor prognosis
- Generally quite impaired on cognitive tests
- More likely to have poor premorbid functioning with early, insidious onset
- Less likely to remit

Catatonic subtype: Criteria
- Clinical picture dominated by 2 or more changes in motor activity
  - motone immobility
  - purposeless, excessive motor activity
  - extreme negativism (resistance to all instruction, mutism, rigid posture)
  - peculiarities of voluntary movement
  - echolalia or echopraxia

Catatonic subtype: features
- Risk for malnutrition, exhaustion, self harm
- Not to be confused with neuroleptic-induced parkinsonism
**Undifferentiated Type: Criteria**
- Symptoms that meet criterion A are present, but the criteria are not met for the other subtypes

**Residual Type: Criteria**
- Absence of prominent positive symptoms (delusions, hallucinations, disorganized speech/behavior)
- Continuing evidence of the disturbance indicated by presence of negative symptoms or two or more symptoms listed in criterion A, but in attenuated form (such as odd beliefs, unusual perceptual experiences)

**Schizophreniform Disorder Diagnostic Criteria**
- A, D, & E of schizophrenia are met
- An episode of the disorder lasts at least 1 month but less than 6 months
- Social/occupational functioning may be impaired, but not required for diagnosis

**Brief Psychotic Disorder Diagnostic Criteria**
- Presence of 1 or more delusions, hallucinations, disorganized speech, grossly disorganized behavior
- Duration at least 1 day but less than 1 month
- Not due to mood, medical, substance
- With/Without marked stressor(s)
  - *very treatable*

**Brief Psychotic Disorder (cont.)**
- With postpartum onset (diagnosis if onset comes within 4 weeks postpartum)
- Usually associated with overwhelming emotional turmoil and confusion

**Delusional Disorder: Criteria**
- Nonbizarre delusions (involving situations that could occur in real life) of at least 1 month duration
- Criterion A for schizophrenia not met
- Otherwise, person not markedly impaired
- Not due to mood, medical, substance
Delusional Disorder: types

-Erotomanic: another person, usually of higher status, is in love with the person
-Grandiose: inflated worth, power, knowledge, identity, or special relationship to a deity or famous person
-Jealous: individual's sexual partner is unfaithful (Othello)

Types (cont.)

-Persecutory: person is being malevolently treated in some way
-Somatic: person has some physical defect or general medical condition
-Mixed
-Unspecified

Delusional Disorder: features

-Onset generally later than schizophrenia
-Person may function fairly well, but delusions can result in social, marital or work problems.
-Those with somatic delusions often subject to unnecessary medical tests & procedures.

Schizoaffective Disorder: Criteria

-A: An uninterrupted period of illness during which there is either a Major Depressive Episode, a Manic Episode, or a Mixed Episode concurrent with symptoms that meet Criterion A for schizophrenia.
-B: During the period of illness there have been delusions or hallucinations.

Fine line between depression or bipolar w/ psychotic symptoms

Criteria (cont.)

...for at least 2 weeks in the absence of prominent mood symptoms.
-Symptoms that meet criteria for a mood episode are present for a substantial portion of the total duration of the active and residual periods of the illness.
-Not due to medical, substance abuse
-Bipolar Type & Depressive Type

Shared Psychotic Disorder (Folie a Deux)

-A delusion develops in an individual in the context of a close relationship with another person who has an already-established delusion.
-Delusion is similar in content
-Not accounted for by other psychotic illnesses, use of medication, etc.
Shared Psychotic Disorder (cont)

- Not common
- Usually the primary (inducer) delusional person is dominant in the relationship and gradually imposes the delusional system on the more passive person.

Medication Treatment

- Antipsychotic Medication
- Diverse group of drugs that block the dopamine type 2 receptor.
- Thorazine, Haldol, Mellaril, Prolixin
- Often been referred to as ‘major tranquilizers’ - this is a misnomer
- Also termed ‘neuroleptics’

Antipsychotics (cont)

- Thorazine introduced in the 50s
- Results in clinical improvements in 50-75% of psychotic patients
- Adverse effects: dopamine system
  - Parkinonsian symptoms
  - Acute dystonia: muscle contraction/spasm
  - Akinetia/akinetesia: pacing, agitation
  - Tardive dyskinesia: choreoathetoid movement of the head, limbs, trunk.

Antipsychotics (cont)

- Neuroleptic malignant syndrome: rigidity, dystonia, autonomic arousal, fever 20-30% mortality
- Other effects: sedation, nausea, weight gain, dry mouth, blurred vision, hypotension, etc.

Atypical antipsychotics

- Newer drugs
- Fewer side effects
- Act on dopamine but also other systems (i.e. serotonergic)
- Risperdal, Clozaril, Zypraxa, Seroquel

Medication cost (1 month at usual dose)*

- Zypraxa: $523
- Seroquel: $425
- Clozaril: $640 (plus need for labs)
- Risperdal: $304
- Haldol po: $24
- Haldol im Q4week: $5
- ** this info is dated
Psychosocial Treatment

- Schizophrenia requires long term, multimodal approach.
- Hospitalization/day-treatment
- Residential treatment
- Therapies—supportive individual, group, family. Goals to facilitate coping, support, medication compliance
- NAMI—National Alliance for the Mentally Ill. Advocacy, Family support.

Schizophrenia Research:
Overview

- A majority of schizophrenics show cognitive impairment (verbal memory, decreased ‘executive’ functions)
- Genetics: prevalence
  - General population: 1.0
  - Nontwin sibling of schizophrenic: 8.0
  - Child with 1 schiz. Parent: 12.0
  - Dizygotic twin of schiz.: 12.0

Research (cont.)

- Child of 2 schiz. Parents: 40.0
- Monozygotic twin of schiz.: 47.0
- Imaging studies:
  - Lateral/3rd ventricle enlargement in schizophrenics
  - Reduction in cortical volume
  - MRI: reduction in volume within hippocampal-amygdala complex

Research (cont.)

- PET: hypofunction in frontal lobes
- PET: hypofunction in basal ganglia
- Eye movements: Disinhibition of saccadic eye movements; inability to accurately follow a moving visual target (disorder of smooth visual pursuit)

Bottom Line

- Schizophrenia is a heterogenous disorder (probably has multiple etiologies)
- It is associated with abnormal brain functioning
- It is typically a chronic, devastating disorder personally & socially
- Treatment has improved but is imperfect.