

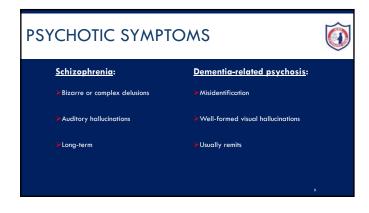
# SCHIZOPHRENIA "Dementia Proecox" Lifetime prevalence of 1% (male=female) 0.1-0.5% of elderly Peak age of onset: 10-25 (men) 25-35 (women) Ventricular enlargement, cortical atrophy and soft neurological signs.

## AGE OF ONSET Early onset: Up to age 40 (45) . 75-80% of cases Late onset: 40-60 . Often female . Better prognosis Very late onset: 60+ . Rare . More medical co-morbidities

## SCHIZOPHRENIA Cause unknown. Risk factors: Genetics. S0% concordance monozygatic twins. Winter/spring birth. Influenza during pregnancy. Dopamine Hypothesis: Increased limbic, decreased frontal. Other neurotransmitters also implicated

### SCHIZOPHRENIA: DIAGNOSTIC CRITERIA 2 or more of following actively occurring over 1 month period: Delusions\* Hallucinations\* Disorganized speech\* Grossly disorganized or catatonic behavior Negative symptoms Total duration of illness 6 months or more

### SCHIZOPHRENIA SYMPTOMS Positive Symptoms: Delusions Hallucinations Disorganized speech Disorganized behavior Audition Apathy Ambivalence Anhedonia Etc.



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- More than 70% of schizophrenics affected.
- May be less impactful for late-onset cases.
- May be worse in institutionalized vs. community.
- May affect executive function, memory, IQ, visuospatial function, processing speed, attention, arithmetic and verbal fluency.
- Cognitive abilities may remain stable over the course of the illness in many patients.
  • Those in nursing homes more likely to decline.
- Schizophrenics overall have higher risk of dementia.

### SCHIZOPHRENIA TREATMENT



- Antipsychotic medication:

  Conventional/Typical (1st Gen)

  Dopamine (D2) antagenist

  Novel/Artypical (2nd Gen)

  Dopamine & serotonin antagenist

- ECT
  Safe and effective option for older schizophrenics.
- Psychosocial:
   Social skills training, supported employment, cognitive remediation, psychotherapy, groups.
   Family support and case management.

### **ANTIPSYCHOTICS**



### First Gen (Typical)

- ► Haloperidol (Haldol)
- Fluphenazine (Prolixin) Thiothixine (Navane)
- Perphenazine (Trilafon)
- Trifluperzaine (Stelazine)
- Thioridazine (Mellaril) Chlorpromazine (Thorazine)
- Loxapine (Loxitane)
- Others

### Second Gen (Atypical)

- Risperidone (Risperdal)\*
- Olanzapine (Zyprexa)\*
- Clozapine (Clozaril)
- Quetiapine(Seroquel)
- Ziprasidone (Geodon)
- Apiprazole (Abilify)
- Paliperidone (Invega) Lurasidone (Latuda)
- Asenapine (Saphris)
- ►lloperidone (Fanapt)

EXTRAPYRAMIDAI	. SIDE EF	<b>FECTS</b>	(EPS)
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### Parkinsonism:

- · 20-35% overall prevalence · Higher for elderly
- · Resting tremor
- · Rigidity · Bradykinesia · Shuffling gait
- Treat with anticholinergic or amantadine.

- · Dystonia (torticollis, oculogyric)
- DroolingAkathisia (restlessness)
- · Tardive dyskinesia

### TARDIVE DYKINESIA



- Abnormal movements of face/mouth such as lip smacking, clenching, chewing, puckering, and tongue thrusting. May also see choreiform movements in limbs.
- > Prevalence 20-30% overall (50-60% for elderly).
- ➤ Usually develops over months or years, but sometimes sooner.
- Most cases are irreversible (dopamine receptor sensitivity altered).
- Risk factors: Female, higher negative/positive symptoms, greater cognitive impairment, other drug-induced movements, substance use, diabetes.

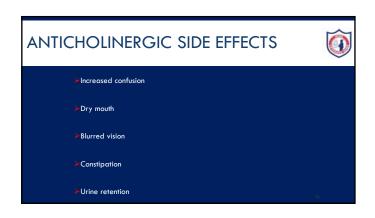
### TARDIVE DYSKINESIA: MANAGEMENT (i)



- ➤ Prevention: Screening is crucial.
- Choose antipsychotics with less risk. Once TD starts, switching may
- Anticholinergics may worsen; try to eliminate.
- > Reduction in dose may worsen.
- Consider severity and impact on patient.
- ►VAMT2 inhibitors:
- Valbenazine
- Deutetrabenazine

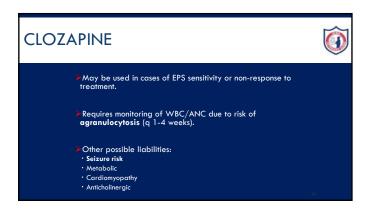
# RELATIVE RISK OF EPS FOR ATYPICAL ANTIPSYCHOTICS Risk: Agents: Low Clozapine Quetiapine Intermediate Olanzapine High Risperidone Ziprasidone Aripiprazole

NEUROLEPTIC MALIGNANT SYNDROME (NMS)
Associated with initiation of or increase in antipsychotic.
➤ High doses or multiple antipsychotics have higher risk.
Features: Confusion, delirium, tremor, stiffness, autonomic instability, fever, death.
Creatinine Kinase <u>markedly</u> elevated; WBC and LFTs may be elevated as well.
Tx: Stop antipsychotic, admit to medical, supportive measures, may need bromocriptine, dantrolene or amantadine.



### METABOLIC SYNDROME Mainly associated with second generation (atypical) agents. Weight gain, hyperlipidemia, hyperglycemia, higher risk of diabetes. 32.5% of schizophrenics. Metformin may be beneficial. Risk for weight gain: Higher Risk: Olanzapine, dazapine Medium Risk: Risperidone, quetiapine, poliperidone Lower Risk: Aripiprazole, ziprasidone, lurasidone, asenapine, holoperidol

### OTHER COMPLICATIONS Orthostatic hypotension (falls) Hyperprolactinemia Cardiac conduction (QT prolongation) Seizures Antihistaminic: Sedation Weight gain



LONG-TERM INJECTABLE ANTIPSYCHOTIC	s 🕡
<ul> <li>Haloperidol, risperidone, paliperidone, aripiprazole and of the superior to orange of the superior to orange</li></ul>	
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### **DEPRESSION**



- >May be difficult to differentiate from negative symptoms.
- ightharpoonup Rule out medical conditions that may mimic depression.
- ➤Not particular agent favored.
- ➤ Use atypical antipsychotics.
- Consider psychotherapy.
- ▶Important to treat:
- CognitionSuicide risk

### **SUICIDE RISK**



- ➤ Suicidal ideation prevalence: 10% current, 56% lifetime.
- Risk factors: Multiple hospitalizations, previous attempts, comorbid mood and personality disorders, substance abuse.
- ➤ Major depression + schizophrenia = greatly increased risk

## SCHIZOPHRENIA: PROGNOSIS About 60% of patients have substantial improvement or full remission of positive symptoms on antipsychotic medication. Many experience slow functional deterioration over lifetime. Most will not be able to work (unless supported). Less likely to drive, marry, or live independently than bipolar cohorts. Lower socioeconomic status: "Downward Drift"

### SCHIZOPHRENIA-SPECTRUM DISORDERS

## SCHIZOPHRENIFORM DISORDER Same criteria for Schizophrenia, but total duration is less than 6 months. Often rapid onset. Prognosis is better. Treated with antipsychotics, but may not need long term.

SCHIZOAFFECTIVE DISORDER	
Elements of schizophrenia combined with elements of either bipolar disorder or major depression.	
➤The mood Sx (mania and/or depression) must account for a substantial portion of the total duration of the illness.	
▶Patient has periods (2 weeks or more) of psychosis occurring during times when they are not manic or depressed.	
▶ Bipolar/Depressive Types. <ul> <li>· With catatonia</li> </ul>	

### SCHIZOAFFECTIVE DISORDER: **TREATMENT**



- ➤ Similar to schizophrenia, but also mood stabilizers and antidepressants.
- ➤ Prognosis similar to schizophrenia

### SCHIZOTYPAL PERSONALITY DISORDER



- A pervasive pattern of social and interpersonal deficits marked by acute discomfort with, and reduced capacity for, close relationships as well as by cognitive or perceptual distortions and eccentricities of behavior, beginning by early adulthood and present in a variety of contexts, as indicated by <u>five</u> (or more) of the following: I deas of reference (excluding delusions).

  Odd beliefs or magical thinking that influences behavior and is inconsistent with subcultural norms.

  Unusual perceptual experiences, including bodily illusions.

  Odd thinking and speech.

  Suspiciousness or paranoid ideation.

  Inappropriate or constricted affect.

  Behavior or appearance that is odd, eccentric, or peculiar.

  Lack of close friends or confidants other than first-degree relatives.

  Excessive social anxiety that does not diminish with familiarity and tends to be associated with paranoid fears rather than negative judgments about self.

- Late-onset schizophrenics are often diagnosed with cluster A personality disorders prior to the onset of schizophrenia.

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ISSUES IN LONG-TERM CARE	
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NURSING HOMES	
Have become defacto institutions for those with serious mental	
illness (SMI), following deinstitutionalization and closing of state hospitals.	
In VA system, as inpatient beds and stays decreased, prevalence of SMI in nursing homes increased.	
of SMI in nursing homes increased.	
2.7-7.1% of nursing home residents have SMI.	
>80% of schizophrenics live in the community.	
NURSING HOMES	
Residents with SMI more likely to stay long term.	
<ul> <li>Residents with SMI are younger:         <ul> <li>Average age at time of entry is 65 for SMI, and 80 for those who are not SMI.</li> <li>Middle aged patients with schizophrenia are 4 times more likely to need nursing</li> </ul> </li> </ul>	
<ul> <li>made aged patents with sanzophrenta are 4 littles more likery to need norsing home placement than same-age peers without SMI.</li> </ul>	
Nursing homes with larger percentage of SMI residents tend to be lower in quality:	
<ul> <li>Staffed at lower levels, higer Medicaid, use restraints more, more ulcers, more feeding tubes, more catheters, more hospitalizations, more deficiency citations.</li> </ul>	

### **NURSING HOMES**



- Compared with community cohorts, patients with SMI in nursing homes are more likely to have severe psychiatric symptoms, greater cognitive deficits, more functional and physical impairment, more aggressive behavior, and less social support.
- In nursing homes, those with dementia alone had more aggressive behavior than those who had SMI alone. But those who had dementia AND SMI had the highest rates of all.
- ➤ Challenges: Training for staff, finding psychiatric providers, developing appropriate activities for younger residents.

### CO-MORBID MEDICAL CONDITIONS



- ►Tend to be exacerbated by schizophrenia.
- Schizophrenics often receive inadequate healthcare.
- ► Medications may have long-term effects.
- ➤ Substance use (including tobacco) may contribute.

### **END-OF-LIFE CARE FOR SCHIZOPHRENICS**



- More likely than cohorts to die in nursing homes.
- Less likely to see (non-psychiatric) specialists.
- Less likely to be prescribed analgesics.
- Less likely to receive palliative care.
- ▶ Psychiatric medications should be continued as comfort care.

### ANTIPSYCHOTIC REDUCTION Length of treatment guidelines vary for all age groups. ➤ Very little research on reductions for older schizophrenics. ➤ Risk/benefit analysis is needed (including patient preference). ▶ Patients on the ends of the severity spectrum may be best ANTIPSYCHOTIC REDUCTION For all age groups, following factors are associated with lower rate of relapse after discontinuation: · Low dose prior to discontinuation. · Older age. · Shorter duration of untreated psychosis. $\boldsymbol{\cdot}$ Lower severity of positive symptoms. • Better social functioning. • Lower number of previous relapses. · Later onset. QUESTIONS?

References:
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2. Auchbenner K, Grabowskii DC, Caris, Barels SI, Mar V. Marsing home administer and long-stay convenions among persons with and without serious mental illness. J Aging Soc Policy. 2011;16:569-200;206-264.
4. Barteli SJ, Prett SJ. Psychosocial rehabilization and quality of life for older adults with serious mental illness: recent findings and future research directions. Curr Opin Psychiatry. 2009 14(22)(4):381-5.
5. Becker M, Andel R, Boss T, Howell T. The suscicion of individual and facility characteristics with psychiatric hospitalization among nursing home residents. Int J Genter Psychiatry, 2009/Mary,14(2):254-8.  6. Bowerson NW, Schramol KE, McCarthy F, Association between conclusionistics and associated by audit the prevailence of serious mental filmes in Veteran Affairs nursing homes. Am J Public Warth. 2011;1(10):771:225-13.
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9. Chachinov HM, Marters IP, Prior HII, Redester MS. Comparative health care use patterns of people with schapiprenia near the end of Mir: a population-based study in Manisbab, Canada. Schapphr Res. 2012 Nov;44(2)-2):241-4.
10. Citrome L. Clinical management of turdine dyslinesis: Rive steps to success. J Rivard Sci. 2617 Opc 15;883:199-200. Nov 16. Review.
12 Small A, AVG, Antipoychotic drug treatment for eldenly people with late-orient schoolphrenia. Contrave Database Syst Rev. 2012 Feb 15(2) (2000H12).
13 Felimer K, Zisodi K, Baschaw MI. Elderly patients with schizophrenia and depression: deagnosis and treatment. Clin Schizophr Anker Psychoses. 25(1) 10n;4(6) 239-50.  14 Felixon CP, Lebowich SD, Lindamer LA, Palmer SW, Patterson TI, Jenso DY. Edologhrenia in Islan III's emerging issues. Dislagues Clin Neurosci. 2006;5(1):45-52.
16. Heldoot UV, Lecount IXA, Lecounter CA, Fatter 140, Vistanian 11, Audit UV. Schropperson in case in everying instead. Discipling Landwidth Conference Control, 151, Mental Illness in Nursing Monner. Variations Across Stores. Grabowish CA, And Zerenner CA, Feng Z, Mor V. Health affairs (Project Hope). 2009 May-Lun; 28(2):549-700.
16. Goo JF, Regland ID, Center CS, Memory and caprison in uchicaphenia. Mal Psychotry. 2019 Nary,24(5):613-602. 21.
17. HILLI H, F. BIS CC, Liu T, Trig JC, Lee SK. Differences in the Effectiveness of Long-Acting Injection and Orally Administrated Antipsychotocs in Reducing Rehosphalasation a mong Pasients with Schloophrenia Receiving Home Care Services. J Clin Med. 2019 Jun 95(16), pp. ED2.
18. islenques I, Raches C, Toutauchaux R, Celler Y, Legrand G. (Old periods suffering from long-standing schizophrenia: clinical aspects). Gester Psychol Neuropsychiatr Viol. 2011 (app)(2):345-53. doi: 10.1664/jour.2011.0265. Review.
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22 Küsses DN, Santo X, Alexopoulos GS. Sulcide in older subths: the role of emotions and cognition. Curr Psychiatry Rep. 2014 Nov. 35(11) 495.
23 Kurnagaya D, Haliday G. Acate electroconvolvine therapy in the elderly with schapphrenia and school-flective disorder: a literature review. Australias Ryschany. 2019 CR; 27(5) 472-476.
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25. U.Y., CHX, CLERN P. Are patients with serious mental illness many likely to be admitted to numing homes with more deficiencies in care? Med Care. 2011 Apryl RQ1 307-405. doi: 10.1097/MRR.20021e310302ac10.
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