

## General Mental state findings – OSCE

**"Remember** formulation tells us **HOW** the person became depressed/manic/psychotic as a result of their **genetics, personality, psychological factors**, biological factors, social circumstances (ACE and social determinants) and their environment"

### # 1 Depression

**Summary:** A 19 yo female arts student previously well presenting with a 2/12 hx of persistent low mood since her grandmother passed away 2/12 ago. Her low mood has been associated with poor appetite, lack of motivation for social participation, difficulty concentration and increased tiredness.

#### MSE:

A XX yo gentleman/lady occupation who:

- **A, B** - appears tired but well-dressed
  - displaying poor eye contact
- **Speech**
  - speaking with a quiet monotonous tone
  - Her speech is reactive but slow.
- **Mood/affect** - She/He feels their overall mood is low, which I agree with.
- **Thoughts** - She/he has experienced (no.) (type) hallucinations which feature -----
- **Perception/Cognition** - She/he has/hasn't admitted to suicidal ideation. Does she have plans on when or how? Suicide note? Notifying significant others?
- **Insight/Judgement** - do they think their mood is an issue? Are they motivated to be treated? How do they feel about it?

#### Formulation (how did they become like this?):

**1) Intro:** A 19yo arts student presents with low mood following the death of her grandmother 2/12 ago.

> notable PMHx or psychiatric hx of: -----

> genetic vulnerabilities for mental illness in her family history.

> medication compliance (sub-therapeutic, poorly compliant)

> ongoing substance abuse?

#### 2) Predisposing factors (bg hx – developmental)

- She is biologically /socially predisposed with:
  - FHx of depression?, alcohol/substance use disorder in the family
  - parental divorce, unstable home life, history of trauma
  - Underlying hx of childhood trauma (sexual, physical, emotional)
- Which has contributed to her psychological struggles of:
  - Fears of abandonment, invalidation, self-worth
  - Temperament / personality (dependent, invalidating experiences, unable to develop personal identity)

These difficulties are reflected in her adulthood leading to them to think that:

- They are...
- Others are...
- The world is...

#### 3) Precipitating factors:

"The major event – death, loss of job, family, cease meds, re-experiencing of trauma" has triggered/reactivated"

- More primitive defence mechanisms
- Immature / mature Coping strategies

#### 4) Perpetuating factors: Their symptoms have been perpetuated by:

- Biological factors (co-morbidities, ongoing alcohol use)
- Social (financial stressors)
- Psychological (maladaptive Coping strategies, personality traits)

#### 5) "However, she displays a number of **protective factors** including"

- Supportive family and friends
- Good insight into her mental well-being (psychologically minded)
- High-functioning status (university educated)

#### 7) Hence, I believe her overall prognosis is **good/poor** and will likely benefit from

- **non-pharm strategies** - CBT, positive lifestyle interventions, support groups, promote social interactions etc.
- **Pharm:** SSRI, anti-craving agents

**DDx:** She likely has a psychiatric diagnosis, likely a mood disorder. This would include unipolar depression as she displays the core symptoms of depression (low mood, anhedonia and anergia) alongside some somatic symptoms of reduced concentration, anorexia. Bipolar is another ddx but is less likely given that she has not state a period of high/elevated mood which would suggest a manic episode.

**Mx:** Non-pharmacological strategies with lifestyle interventions, and linkage with counselling support through a psychologist and considerations of CBT

#### What psychiatric conditions can cause low mood?

- MDD,
- dysthymia,
- mood-disorder related to health condition
- Bipolar,
- Substance induced mood disorder

#### What medical conditions can cause low mood?

- Chronic infection (HIV, hep B/C), chronic co-morbidities (DM, HF, cancer),
- metabolic/electrolyte (anaemia, uremia, hyperCa),
- endocrine (hypothyroidism, Addison),
- neuro (SoL, dementia, Parkinson's, epilepsy), medications

**How is depression managed? What type of antidepressants are there? Give me one advantage and disadvantage for each drug class.**

- **Non-pharm** – CBT, psychoeducation, lifestyle (diet, exercise, sleep, cessation of smoking, alcohol, recreational drugs)
- **Pharm** – SSRI > SNRI > Serotonin antagonist > MAOI > TCA
  - Adv: SNRI (minimise OD), PO administration
  - Disadv: A/E, 4-6 weeks for therapeutic effect, requires compliance/adherence, works differently between different individuals

#### Do you know of any questionnaires used in hospitals or the community for depressive symptoms?

- Primary care – DASS 21
- Hospitals – PHQ-9, 15-item Geriatric depression scale (GDS-15) for elderly, Edinburgh depression scale (for ante-natal and post-natal)

#### What are some other strategies to consider?

Disposition	<ul style="list-style-type: none"><li>• What level of care (outpatient vs inpatient)? – are they safe to be in community?</li></ul>
Biological	<ul style="list-style-type: none"><li>• Non-pharm</li><li>• Pharm – sertraline 50mg PO OD (Max dose of 200mg)</li><li>• Anti-craving agents to reduce cravings for alcohol use (e.g. naltrexone, acamprosate)</li></ul>
Psych	<ul style="list-style-type: none"><li>• CBT – depression</li><li>• Motivational interviewing – alcohol use</li><li>• Consider specific or death-traum therapy for long-term Mx (after CBT)</li></ul>
Social	<ul style="list-style-type: none"><li>• Access support from job's HR department or student support services</li><li>• Substance use groups (e.g. AA)</li><li>• Increasing connections with friends and social support</li></ul>

# ABNORMAL GRIEF REACTION

## Summary:

- 54 yo widow and previous headteacher presents to acute medical ward from home after being discovered by family confused and disorientated.
- In the context of her husband's of 21 years death few months ago
- **PMHx** of rheumatoid arthritis and T2DM, no psychiatric hx
- Continues to have delusions that her husband remains alive
- Low suicidal risk since her delusions feature her husband still alive
- Eating and drinking well
- **Meds** – requires many painkillers, and uses metformin
- **Social Hx** – no children. Regular alcohol usage (glass of sherry)

## MSE:

A 54 yo widow and retired headteacher who:

- **A, B** - appears restless, distressed, easily distractable, but maintains good eye contact.
- **Speech**
  - She speaks rapidly, with a hint of frustration in her tone
- **Mood/affect** – She feels her mood is fine but this incongruent to her actual affect.
- **Thoughts** – Although she does not report any hallucinations or thought disorders, she continues to have delusions about her husband being alive, whether it be waiting to pick her up or waiting for her at home. Her thoughts appear to be a flight of ideas.
- **Perception/Cognition** – She states she has not had any suicidal thoughts, since she still believes she could never do something like that to her husband.

She remains disorientated to place and time.

- **Insight/Judgement** – She also does not have any insight into her current condition or make appropriate judgements in day to day activities

## Formulation (how did they become like this?):

- 1) **Intro:** A previously well 54 yo widow and retired headteacher presents to the acute medical ward from home after her family discovered her confused and disorientated.
- 2) This is in the context of the death of husband of 21 years, a few months ago with no significant background psychiatric history and chronic usage of analgesics.

### 3) Predisposing factors (bg hx – developmental)

- She appears to have had an unremarkable childhood upbringing, with no obvious psychological struggles of abandonment, insecurity.
- However, her long-standing marriage which did not feature any children suggest possible difficulties in conceiving, personality conflicts between her and her husband, underlying unspoken childhood trauma on either her or her husband's side.
- These challenges are reflected in her current circumstance leading to her delusions of her husband still being alive, which can be seen as a defensive coping mechanism to manage her insecurities when abandoned

### 4) "However, she displays a number of protective factors including"

- A supportive family and previous high-functioning role as a headteacher can seen as protective factors.

**5) Hence, I believe her overall prognosis is good/poor and will likely benefit from**

- **Non-pharm strategies** - CBT, positive lifestyle interventions, support groups, promote social interactions etc.
- **Pharm:** SSRI, anti-craving agents

**DDx:** She likely has a psychiatric diagnosis, likely an **abnormal grief reaction** given that it appears specifically attributed to the death of her husband a few years ago.

Still possible:

- **Delirium** - polypharmacy (review analgesic usage), underlying infection, electrolyte abnormalities

Less likely to be:

- **Depression** – no evidence of anhedonia, low mood
- **PTSD** – not relieving events

## Mx:

- Organic screen required – FBC, EUC/CMP, LFT, BSL, HbA1C, lipids, TFT,
  - +/- Non-contrast CTB, ECG,
- **Non-pharmacological strategies** may include psycho-education, bereavement counselling, family based therapies
- **Pharm:** ?SSRI – may not get rid of delusions

## What is an abnormal grief reaction?

**DSM-V** [complex bereavement disorder]

- An individual experiences the death of a loved one
- **AND** At least one of the following Sx, occurs for > 12 mths (adults), > 6 mths (child)
  - Yearning / longing
  - Pre-occupied with deceased
  - Pre-occupied with circumstances of death
  - Emotional pain
- **AND** at least 6 of the following Sx for > 12 mths (adults), > 6 mths (child)
  - Difficulty accepting loss
  - Disbelief
  - Anger
  - Self-blame
  - Desire to die to re-unite with loved one
  - Distrust of others
  - Loneliness
  - Emptiness / meaningless in life
  - Diminished sense of identity
  - Amotivation

## How is abnormal grief reaction treated?

Non-pharm:

- grief counselling or therapy
- psycho-education into the normal stages of grieving

Pharm:

- SSRI?

## What is the difference between dementia and delirium? Can you name some causes of delirium?

- **Dementia** – progressive neurodegenerative disease characterised with cognitive and functional decline
- **Delirium** – transient reversible altered state of fluctuating consciousness, inattention and impaired cognition. Reversible causes may include:

- Medications
- Infection
- Pain
- Retention
- Electrolyte disturbance
- Metabolic (uraemia, anaemia)
- Endocrine (thyrotoxicosis, Addison, DM)
- TTP, trauma, toxins
- Neuro (SoL, infection, bleed, stroke, Parkinson's)

## Can you name any drugs which may contribute to delirium?

- Anti-psychotics, anti-convulsant,
- anti-depressants (anti-cholinergic)
- Anti-dopaminergic
- Corticosteroids (steroid induced psychosis)
- Anti-HTN
- Statins
- OCP
- Opioids

## #2: Obsessive compulsive disorder

**Summary:** A previously fit and well 23 yo graphics designer for a real-estate company presents with 3/52 hx of unwanted thoughts about super-bugs with no underlying psychiatric or medical illness. She feels compelled to wash her hands multiple times for 15 mins to the point where her hands have become cracked and sore. Only after completing these actions, does she feel relieved. She feels frustrated and stressed since she cannot resist these urges despite her best attempts to calm herself with relaxation techniques. Her current worries have negatively impacted her work performance and social relationships. She does not take any regular medications, does not report any substance use.

### MSE:

A 23 yo lady graphics designer who:

- **A, B** - appears alert, well-kept and displaying good eye contact.
- **Speech**
  - She speaks rapidly with an emphatic tone and demonstrates reactive speech
- **Mood/affect** - She does not feel low in mood, only anxious when thinking about bacteria, which is inkeeping with her overall affect.
- **Thoughts** - She understands that her thoughts are her own but are unreasonable.
- **Perception/Cognition** - She has no suicidal thoughts and
- **Insight/Judgement** - displays good insight about her thoughts and actions

### Formulation (how did they become like this?):

**1) Intro:** A 23yo female graphic designer presents with intrusive thoughts about superbugs with compulsions to maintain hygiene in the context of reading a news report about antibiotic resistant strains of bacteria.

### 2) Sig. Psych Background

This is on a background of previous adolescent anorexia nervosa which warranted one hospital admission for refeeding and has been successfully managed with behavioural therapy

### 3) Predisposing and Perpetuating factors (bg hx – developmental)

- Her biological and social predispositions include significant childhood trauma witnessing her father's passing in a MVA at age 9, while she was in the car.
- This has likely contributed to her psychological struggles of insecurity, abandonment and isolation, anxiety, low self-esteem and rigid cognitive style.
- These difficulties are reflected in her suffering a period of self-doubt during adolescence seen by her diagnosis of anorexia nervosa with possibly immature coping mechanisms to manage acute stressors in her life as seen by her inability to manage workloads and deadlines in her current job while experiencing these intrusive thoughts and compulsions.

### 4) However, she displays a number of protective factors including"

- Working in a high-functioning occupation, having a supportive social network at work and exhibiting good insight into her mental well-being

### 5) Hence, I believe her overall prognosis is good/poor and will likely benefit from

- non-pharm strategies - CBT, positive lifestyle interventions, support groups, promote social interactions etc.
- Pharm: SSRI, anti-craving agents

**DDx:** She likely has a psychiatric diagnosis, likely obsessive compulsive disorder, given that she has good insight into her symptoms and displays a few week history of persistent intrusive thoughts that induce compulsions to relieve worries.

**Mx:** Non-pharmacological strategies may include cognitive behavioural therapy particularly focussing on exposure and responses with possible escalation to pharmacotherapies such as SSRIs titrated accordingly to achieve therapeutic effect.

### What is the ICD-10 criteria for obsessive compulsive disorder?

For most days of at least 2 successive weeks of:

- Obsessional thoughts/symptoms OR/AND
- Compulsive acts that are unpleasantly repetitive and relieves worry/anxiety Which interfere with activities or causes
- NOT due to organic condition, or other disorder (e.g. dysmorphic disorder)

### How would you assess this patient further?

- Vitals
- Assess damage of compulsions – skin damage, signs of infection
- CVS, RESP, ABDO exam – exclude organic cause

### What management is available for this patient?

- Psychotherapy - CBT ( exposure and response – lower anxiety without compulsion)
- Medication - SSRI

### What risk factors does this patient have for obsessive compulsive disorder?

- Genetics (identical twins)
- Major life events - Childhood trauma – loss of parental figure
- Female
- Young age
- Work stress

### #3: ALCOHOL DEPENDENCE

#### Summary:

- 62 yo father BIB daughter to hospital against his will after concerns of abnormal behaviour in the past 6/12 months.
- He has a significant PMHx of chronic alcohol abuse regularly drinking a bottle of whisky a day, now adding a few cans of strong lager to get effect
- His behaviour has been associated with reduced appetite, reduced social activities with an increased pre-occupation of drinking alcohol.
- No suicidal thoughts
- Has been drinking more since wife left for another man who she met at bingo and forced to move out of family home
- Previous MVA where he drove into tree then drove off – nil injuries

#### PMHx

- Ischaemic heart disease - STEMI 2009
- Nil psychiatric illness
- Meds: Clopidogrel, ramipril. Denies any other recreational drug use.

#### FHx

- father died of brain cancer when very young.
- FHx of alcohol abusers

#### Social Hx =

- currently live alone in a bedsit. Adult daughter and son are far away and he misses them.
- Previously worked as a joiner

#### MSE:

A 62 year old father and retired joiner presents with his daughter against his will who:

- **A, B** - appears unkempt, smelly (unshowered) agitated and irritable on presentation .
- **Speech**
  - He speaks in a loud commanding and slightly aggressive tone
- **Mood/affect** – He feels low in mood and this is congruent with his affect .
- **Thoughts** – He has not reported any delusions, hallucinations or thought disorders and perceives his surroundings normally.
- **Perception/Cognition** – He has not expressed any suicidal thoughts and is orientated to people, place and time
- **Insight/Judgement** – He displays good insight into his alcohol habits and his judgement appears to be impaired in context of his chronic alcohol usage.

#### Formulation (how did they become like this?):

**1) Intro:** A 62 year old retired joiner and father presents to the hospital by his daughter against his will with concerns over his abnormal behaviour in the context of his progressively worsening alcohol consumption and his recent marriage breakdown with his wife, having to live outside of his home and now being geographically isolated from his supportive adult children.

He has no significant psychiatric background history but is pharmacologically managed for ischaemic heart disease.

#### 3) Predisposing factors (bg hx – developmental)

- His significant family history of alcohol abuse during childhood and his lack of a paternal figure following the sudden death of his father from brain cancer has likely led to him developing feelings of abandonment, insecurity and attachment issues.
- These challenges are reflected in his current circumstance where he has turned to chronic regular alcohol consumption as an immature coping mechanism that models his family's behaviour,
- This may have contributed to his recent long-standing marriage breakdown and subsequent need to move out of his own home,
- These events have further exacerbated his alcohol consumption leading to further social isolation from his friends in the pub, emotional dysregulation and poorer distress tolerance.

#### 4) However, he displays a number of protective factors including:

- A supportive family and good insight into his alcohol behaviour

#### 5) Hence, I believe her overall prognosis is good and will likely benefit from

See management below

**DDx:** His abnormal behaviour characterised by increased irritability, emotional dysregulation is likely associated with his chronic alcohol abuse

#### Likely ddx

- Hepatic encephalopathy
- Wernicke's encephalopathy (B1 deficiency)
- Malnutrition & electrolyte abnormalities (E.g. hyperCa)
- 

#### Mx:

- Non-pharm strategies - CBT , motivational interviewing, support groups (AA)
- Manage medical co-morbidities – ischaemic heart disease, chronic alcoholic liver disease
- Reduced risk of withdrawal and delirium
- Pharm: anti-craving agents (acamprosate, naltrexone)

#### What tools are available to assess alcohol use in patients?

- CAGE questionnaire
  - Concerned, annoyed, guilty, eye-opener
- AUDIT-C (ID binger drinkers)
  - ?how often do you drink in the past year
  - ?how many drinks on typical day
  - ?how often ≥6 drinks/one occasion
- AUDIT

#### What further medical investigations would you like to carry out in this patient?

Once settled and haem stable

- Abdo exam – signs of encephalopathy - asterixes
- ECG
- ?Septic screen – CXR, urine M/C/S,
- Bloods – FBC, EUC/CMP, LFT, BSL, Lipids, CRP, TFT
- Non-contrast CTB – small SDH? Post MVA
- Liver USS → CTAP (?hcc)

#### List the features of alcohol dependency.

- Impairment on social activity
- Withdrawal symptoms present once cessation of alcohol (e.g. tachycardia, diaphoresis, tremors /shakes)
- Impaired control – alcohol seeking behaviour

#### How could you manage this gentleman to help him cut down/stop drinking?

- Understand that the process to quit is slow and difficult – consider 5 A's and embrace motivational interviewing to embrace self-empowerment
- Engage with alcohol support groups (AA)
- Anti-craving agents
- Cognitive behavioural therapy

#### What risk factors for alcohol dependency does this patient exhibit?

- FHx of alcohol abuse
- Single
- Geographically isolated
- Retired (no occupation)
- Male
- Hx of regular alcohol drinking
- Hx of psych trauma – loss of father

## #4: PARANOID SCHIZOPHRENIA

### Summary:

- 22 year old unemployed male adopted from birth referred to the mental health liaison team after sustaining injuries from a fall after jumping out a window associated with hearing external on the bg of an unremarkable past psychiatric or medical history
- He has been hearing external voices for the past 6/12. He can hear 5 different voices of which some are men, women and one is a girl and these voices are not known to him. These voices have increased in frequency and are now constant. The content of the voices include negative criticism of the man in day to day activities. The man understands the voices are factitious but feel so real that he cannot help but listen.
- He also admits to thought insertion and possibly passivity of thought resulting in him undertaking criminal acts such as petty theft, but has never been formally charged.
- His mood is low, concentration poor and has recently been fired from his role as a graphics designer. He attributes all these feelings due to these voices. He previously smoked cannabis socially then on a regular basis but stopped last year due to the voices. He is an active smoker and binge drinks alcohol weekly and has tried ketamine in university a few times but did not report using other substances or recreational drugs.
- He has however, stopped his drinking after a social night out at a pub where he experienced persecutory delusions. He admits that he is aware and concerned about these voices and has undertaken acts of self-harm and is fearful of escalation towards possible suicide.
- He currently lives with a flatmate which he has minimal rapport and has minimal social and family support and interactions.

### MSE:

A 23 yo unemployed gentleman adopted from birth] who:

- **A, B** - appears alert, unkempt, agitated, distressed but engaged . and reactive
- **Speech**
  - Speaks with an exasperated and distressed tone, modulating speech volume and rapidity of speech
- **Mood/affect** - He feels low in his mood and this appears congruent to his overall affect.
- **Thoughts** - He has been experiencing auditory hallucinations featuring thought insertion from multiple voices heard outside his head. The comments feature negative criticism and discouragement into his day-day activities. More worryingly, these voices have become commanding leading him to undertake acts of self-harm with his recent fall from a window suggestive of a suicidal attempt.
- **Perception/Cognition** - He remains attentive and orientated to people, place and time
- **Insight/Judgement** - And displays relatively good insight into his current condition but is fearful that his judgement is compromised due to these voices.

### Formulation (how did they become like this?):

**1) Intro:** A 22yo unemployed and adopted male presents to the Mental liaison team following an intentional fall from a window for review in the context of progressively worsening auditory hallucinations in the past 6/12 and recent job loss as a graphics designer.

He has engaged in previous substance abuse including cannabis, binge drinking and occasional ketamine usage but has stopped in the past month due to these auditory hallucinations. He does not report any known psychiatric or medical history and is not on any medications.

#### 2) Predisposing → Perpetuating factors (bg hx - developmental)

- She is biologically /socially predisposed with being an adopted child from birth could be a major contributor to his psychological struggles of abandonment, insecurity and low self-esteem and low self-worth.
- These challenges are reflected in his current disposition where he has a lack of stable and supportive social and familial relationships, indulged in binge drinking behaviour and cannabis usage which has transgressed into his recent visual and auditory hallucinations, the later being more prominent featuring thought insertion of self-criticism and denigrating comments, which have pre-occupied his thoughts and compromised his judgement in day to day activities. These factors have likely led him to experience commanding hallucinations and believing that he has inadequate psychological support, which have been perpetuated by his geographical isolation from social and family support, recent firing and unhealthy relationships with his current flatmate.

#### 3) "However, she displays a number of protective factors including"

- Good insight into his current condition, being university educated and previously being medically healthy with no concurrent medication usage.

#### 4) Hence, I believe his overall prognosis will be good and will likely benefit from

- Both a combination of non-pharmacological and pharmacological interventions with intent to build up his social support network and coping strategies to prevent future relapses

**DDx:** She likely has a psychiatric diagnosis, likely **schizophrenia**, given that he has been experiencing an at least 6 month history of positive 1<sup>st</sup> rank symptoms including auditory and visual hallucinations alongside disorganized thoughts and thinking including negative symptoms of amotivation to create and maintain social relationships

**DDx**

- 1<sup>st</sup> psychosis
- Substance induced psychotic disorder
- Mood disorder (e.g. unipolar depression or bipolar) with psychotic features
- Schizoaffective disorder

### Mx:

Non-pharmacological strategies may include cognitive behavioural therapy with a psychologist  
Pharmacological strategies include the use of anti-psychotics such as low dose risperidone

### List some positive and negative symptoms of schizophrenia?

- **Positive** - delusion, hallucinations, thought disorders (insertion, withdrawal, broadcasting),
- **Negative** - anhedonia, amotivation, ambivalence,

### What is the ICD-10 criteria for schizophrenia?

More than 1 month of:

At least one of:

- Thought disorder
- Passivity, delusional perception
- Persistent 3<sup>rd</sup> person auditory hallucinations

OR 2 or more of:

- Persistent hallucinations
- Negative symptoms
- Significant behavioural change
- Catatonic behaviour (psychomotor Sx)

### List some common risk factors for schizophrenia?

- Family Hx
- Pregnancy / birth complications (e.g. **malnutrition**, toxin or viral exposure ante-natal period)
- Use of psychoactive drugs during teens and young adulthood
- ACE - violence or trauma

### How would you manage this patient?

- Non-pharm - CBT and lifestyle
- Pharm - Anti-psychotics - **1<sup>st</sup> line = PO risperidone OR**
  - **PO clozapine** (weak D2 blocker) for Rx resistant schizo
  - reduce/abolish **both +ve symptoms [mainly]** and - ve symptoms
- **Invasive - ECT**

### What complications are you aware of with schizophrenia?

- Other psychiatric conditions (anxiety, depression)
- Social impairment (work, finances, relationships)
- Substance abuse (e.g. alcohol, nicotine)
- Suicide risk
- RoSH to others and community

## #5: ANXIETY DISORDER

### Summary:

35 year old law firm secretary presents to the GP with a 3/12 history of progressively worsening psychological and behavioural symptoms characterised by feeling, tense, having persistent worry over trivial matters, difficulties concentration, hypervigilance over the safety of her children and inability to complete routine chores.

She has been otherwise well before in the past month developing somatic/physical symptoms of palpitations, localised chest pains, flushing and diaphoresis, which are most noticeable prior to leaving her house or when her children leave the house. refers to these periods as "crazy episodes". She cannot isolate a particular trigger for these feelings but has noticed that work has been slightly stressful lately due the change in management. has not expressed any suicidal thoughts but is feeling low in her mood because of these crazy episodes and is concerned about providing for her daughter adequately. She has attended the GP with low expectations and is concerned her feelings will remain indefinitely.

Her past medical hx is unremarkable with no regular medication use or substance abuse besides the occasional glass of wine. Family hx only significant for father passing away from heart attack at aged 70.

Social hx – currently living semi-detached house in family of 4 (supportive husband and 2x primary school daughters) in affluent suburb. Discloses that husband was away for work (oil company) 3/12 ago for 4 weeks (the longest he has been away). Has supportive friends in her neighbourhood but has not disclosed her feelings to them.

### MSE:

A 35 yo lady [law firm secretary] who:

- **A, B** - appears alert, frazzled, slightly diaphoretic, distressed and agitated but engaged and reactive throughout the consultation maintaining good eye contact
- **Speech**
  - She spoke rapidly and at times loudly but maintained normal quality and quantity of speech.
- **Mood/affect** – She admits to feeling low in mood and this is consistent with her current affect
- **Thoughts** – Her thoughts remain logical with occasional periods of circumstantial thought, which is predominantly pre-occupied with the safety of her children and social interactions and not being able to adequately provide for her family. There appears to be a theme of insecurity when in public places and fear of abandonment in her thoughts, which have not transgressed into noticeable delusions. She does not have any obvious hallucinations or thought disorders.
- **Perception/Cognition** – She is orientated to people, place and time, remains attentive and does not display any depersonalisation or derealisation with the environment around her.
- **Insight/Judgement** – She has good insight into her current mental state and has acceptable judgement.

### Formulation (how did they become like this?):

#### 1) Intro/PMHx/Genetics:

35 year old female law secretary presents to the GP clinic with a 3/12 history of progressively worsening physical, psychological and behavioural symptoms consistent with an anxiety disorder, which have impacted her ADLs in the context of changing management at work and her husband's recent departure from home for 4-weeks due to his work commitments, also 3/12 ago. She does not have any medical or psychiatric history and has not displayed any substance abuse during the course of her feeling unwell.

#### 2) Predisposing factors (bg hx – developmental)

Living in an affluent suburb, she is a young mother providing for two primary school children with a husband who is often absent in the family setting due to his work commitment. This has created recurrent periods of abandonment and insecurity due to the lack of familial support and a paternal figure to help look after her children.

Although she has previously been able to tolerate his work schedule, his recent departure 3/12 ago (the longest he's been away) appeared to be the catalyst in which she was unable adequately cope with the demands of being a mother and employee and this has been compounded by the recent management restructure at the law firm she has worked in. Her role as a law firm secretary likely required a high level of organisation whereby this recent recurring theme of insecurity and lack of control towards things around has likely manifested in avoidance behaviour where she avoids leaving her home and letting her daughter outside. This coping strategy can be seen as way to regain some control over her life.

#### 3) "However, she displays a number of protective factors including"

- Acknowledging strong existing social relationships with friends, being financially stable and working in a high functional role on the background of being medically health and having good insight into her current condition.

#### 4) Hence, I believe her overall prognosis is good/poor and will likely benefit from

- non-pharm strategies - including cognitive behavioural strategies with psychologists, meditation and relaxation exercises and optimising lifestyle routine and measures.
- If this appears to be ineffective, then considerations to use SSRIs may be reasonable.

**DDx:** My ddx would be a psychiatric diagnosis, more specifically an **GAD**, as Jess experiences both physical and psychological symptoms associated with anxiety on **most days**.

#### Less Likely:

- Situational cause/phobia – since Jess experiences symptoms in variety of situations , not just one
- OCD – despite good insight, does not exhibit obsessive thoughts with compulsive actions

### What physical symptoms can people with anxiety disorders exhibit?

- CVS: Diaphoresis, Heart palpitations, chest pain, shortness of breath (hyperventilation), tremors, tension in muscles
- GI disturbances (nausea, vomiting, abdo cramps)
- CNS: visual disturbances and headaches, light-headed

### What is generalised anxiety disorder? How is this different to other forms of anxiety disorder?

- Generalised anxiety disorder is a collection of excessive persistent and unreasonable somatic and behavioural symptoms that occur as an abnormal response to common stressors towards everyday things.
- These symptoms must occur on most days for at least 6/12 (e.g. irritable, difficulties controlling over worry, tension in muscles, reduced energy, increased tiredness, restlessness and poor concentration)
- These symptoms cause impairment in daily life and NOT are due to medication, drug abuse, or medical condition or explained by another medical disorder

### How could you go about assessing Jess further?

Exclude organic causes (E.g. hyperthyroidism, infection etc.)

- General inspection and vitals
- CVS/RESP/ABDO/THYROID exam
- Bloods – FBC, EUC/CMP, LFT, CRP, BSL, TFT
- ECG

### What are the options for managing Jess' symptoms?

- Non-pharm - CBT, lifestyle (sleep, diet, exercise, cessation of smoking, alcohol)
- Pharm – SSRI > SNRI > MAOI > mirtazapine > TCA

### What are the general ddx of anxiety?

- Panic disorder (unprovoked anxiety attacks)
- GAD
- Depression
- Substance abuse (withdrawal symptoms can mimic a panic attack)
- Organic disorders (e.g. pheo, neuroendocrine tumour – paraganglioma, carcinoid syndromes, hyperthyroidism)

## #6: ATTEMPTED SUICIDE

### Summary:

34 yo female Chemistry teacher presents to the MAU with suspected paracetamol overdose where she was found collapsed at her home letterbox by a friend.

Has expressed multiple suicidal ideations even now in hospital including crashing her own car and has been communicating these thoughts to her sister and mother saying that this is "the end". Did not engage in alcohol or substance misuse at time of paracetamol OD.

She has been feeling low in her mood lately, with poor appetite, poor concentration and difficulties sleeping. More recently, she engaged in a heated argument with a student in class and a neighbouring teacher in the next room had to come in and intervene.

*PMHx* - asthma (Ventolin)

*PPHx* - previous suicide attempt in high school when completing HSC

*FHx* -nil

*Forensic hx* - previous altercation for drunk and disorderly behaviour at university - broke into chemistry labs on campus to steal bromic acid for home experiments

*Social hx* - University educated, chemistry teacher not loving the job as she used to. Mother, daughter - main family. Long-term boyfriend break up. Recent job promotion given to another colleague at school.

### MSE:

A 35 yo female chemistry teacher presenting with suspected paracetamol OD with suicidal intent who:

- **A, B** - Looks unwell, tired, disengaged, detached from environment with poor eye contact and difficulties establishing rapport
- **Speech** - she spoke slowly and minimally with a monotone voice
- **Mood/affect** - *She feels low in her mood which is congruent with her overall affect*
- **Thoughts** - She has expressed suicidal ideation and executing of these suicidal plans. She has also communicated these thoughts with both her mother and daughter. She has not have any delusions, thought disorders or hallucinations.
- **Perception/Cognition** - And perceives that there is no hope for future prospects in her career and personal life. She is orientated to people, place and time but is inattentive at times upon questioning.
- **Insight/Judgement** - She has good insight into her current state but her judgement is compromised.

### Formulation (how did they become like this?):

#### 1) Intro & precipitating factors

34 yo female Chemistry teacher presents to the MAU with suspected paracetamol overdose where she was found collapsed at her home letterbox by a friend in the context of job dissatisfaction, long-term relationship breakup and disapproval over career progression.

*She has had previous suicide attempts in high school due to exam pressure and suffers from well-controlled asthma managed with Ventolin.*

#### 2) Predisposing – perpetuating factors (bg hx – developmental)

*She was brought up in a fractured family, with her father leaving at the age of 2 with no contact since. Her mother was the sole carer for her and her sister while working as a cleaner.*

*These financial struggles during her childhood and lack of a paternal figure likely culminated into her disorganised attachment style as well as unstable and fragile personality traits with fears of insecurity and abandonment.*

*These difficulties are reflected in her adolescence and adulthood she likely believes the world around her is against her and holds no meaningful opportunities despite her best attempts. This has manifested in her inability to access meaningful psychological support beyond her family leading to her previous suicidal attempt in high school and performing petty theft on her university campus.*

#### 3) "However, she displays a number of protective factors including"

- Supportive family where she disclosed her suicidal thoughts.
- Good insight into her mental well-being (psychologically minded)
- High-functioning status (University educated)
- Medically healthy
- Nil substance abuse

#### 7) Hence, I believe her overall prognosis is good/poor and will likely benefit from

- **De-escalation** – ensuring that she is safe to herself and others
- **Need for senior psychiatric review** due to high suicide risk – need to be scheduled under the MH act 2007
- **Non-pharm** – CBT – exploring the nature and origin of her suicidal ideations

**DDx:** My ddx would be a psychiatric diagnosis, is attempted suicide secondary to a moderate to severe depressive episode.

- personality disorder? (e.g. borderline /emotionally unstable) → need more detailed hx

### What are the general risk factors of suicide?

- Major or traumatic life events and stressors
- Xtreme social class (Class I and V) Social isolation
- Stressful occupation
- PMHx of MH illnesses: depression, schizophrenia
- Previous attempts of suicide and self-harms
- Substance abuse and dependence
- Personality disorder
- Chronic physical illness
- FHx of suicide

### What is this lady's risk?

- Single
- Multiple life stressors
  - Recent psychological trauma (e.g. long-term relationship breakup)
  - Unsuccessful job promotion
- Previous suicide attempts
- Underlying personality disorder?

**How would you manage her?** (Bio/psycho/social aspects of depression, when directly managing this situation it is important to mention probable admission to a psychiatry hospital for further assessment)

- Schedule and admit under MH act 2007 – due to high suicide risk
- Engage with senior psychiatrist for review
- ID origin of suicidal thoughts – CBT required → elucidate and help change the underlying beliefs and behaviour that contributed to the depression which led to suicidal ideation
- Ensure biologically healthy – maintain good nutrition, regular exercise and good sleep

### If this patient wanted to leave, what mental health act could you evoke as an intern?

MH act 2007 – scheduled – keep in hospital for up to 3 consecutive days without consent for least restrictive treatment for mental health

- Patient has to be seen by doctor < 12 hours on arrival to mental health centre
  - One by authorised medical officer
  - One by psychiatrist
- Doctor must see the patient every day

Nb: cannot detain a medically ill person more than 3x in any month

### How would you differentiate whether this was an episode of depression or a personality disorder?

The difference predominantly lies in the **symptom patterns**

Depression typically features "one" colour where the patient feels low in mood, lacking motivation to do things and not finding pleasure in previous interests.

In contrast, patients with personality disorders may exhibit symptoms of depression and other additional symptoms (e.g. feeling anxious, tense etc.) whereby their mood swings tend to change more rapidly than patients with depression.

Typically depression patients have insight into their condition where as personality disorders generally do not

## #7: PTSD

### Summary:

Middle aged lady presents to GP with concerns about difficulties concentrating attributed to her XS alcohol consumption. She drinks a bottle of white wine (11% content) over 3 days with no break days and no insight into her drinking habits.

She has developed paranoia and distrust with regards to her social relationships and been progressively isolating herself, with this visit to her GP, the only trip outside of home this week.

She reports having mood swings and feeling emotionally unstable outside of home with her friends commenting on this. She is also sleep deprived, tense, exhausted due to the constant perception of feeling unsafe due to fears of her ex-husband attacking her.

She describes her ex-husband as a mean, violent drunk and controlling and has nightmares about him. She has felt disappointed within herself that she was not able to placate him and has expressed thoughts of revenge for hurting her when day-dreaming, but has not enacted on these thoughts.

She denies any suicidal thoughts.

FHx / PMHx - nil

### MSE:

A middle-aged yo lady who:

- **A, B** – appears poorly dressed, pale/malnourished, disengaged with poor eye contact, always looking at the ground and focussing on their hands, with difficulties obtaining rapport .
- **Speech**
  - They speak quietly, minimally with detached answers to questions.
- **Mood/affect** – She feels low and her affect seems to be emotionally unstable
- **Thoughts** – She understands that her thoughts are her own but are unreasonable.
- **Perception/Cognition** – She has not had suicidal thoughts and
- **Insight/Judgement** – does not display good insight into her condition nor does she exhibit acceptable judgement.

### Formulation (how did they become like this?):

#### 1) Intro/precipitating:

- A middle-aged women presents to the GP with concerns surrounding her chronic alcohol consumption and impaired social dysfunction in the context of a previous traumatic relationship with her ex-husband, where she received verbal and physical abuse.
- She has no known history of psychiatric or medical illness and was not able to share information with regards to her family's medical health.

#### 2) Predisposing factors

- Being a middle-aged women in a long-standing toxic intimate relationship featuring neglect, and dominating control, likely manifested into her developing a submissive attitude associated with her low self-worth and fears of abandonment as a defensive mechanism to maintain the relationship with her ex-husband.
- This has subsequently led to her avoidant behaviours, and inability to maintain existing social relationships and create new and meaningful ones in fear that she will invalidate her relationship with her ex-husband. These perceptions and thoughts have been perpetuated by her self-criticism and self-blame about failing to respond adequately to her husband's behaviour to prevent him from hurting her.
- Consequently, leaving the relationship has continued evoking strong negative emotions with the her ex-husband harming her as a recurring theme in her intrusive thoughts and nightmares, resulting in her hypervigilant behaviour and emotional dysregulation in social settings.

#### 3) "However, she displays a number of protective factors including"

- Supportive friends
- Some insight into her mental well-being where she was cognisant to seek medical help

#### 4) Hence, I believe her overall prognosis remains difficult to judge and will depend on how effectively she responds to

- non-pharm strategies such as cognitive behavioural therapy - trauma focused therapy with Eye Movement Desensitisation and Reprocessing, relaxation exercises (e.g. triangle breathing, mediation, yoga) and employing routine and healthy lifestyle measures.
- Developing stronger patient physician rapport to build trust and promote confidence to develop new social relationships and re-kindle existing ones.

**DDx:** My ddx would be a psychiatric diagnosis:

- **PTSD**
- **Depression with Agoraphobia**
- **Complicated grief reaction,**
- **Enduring personality change after trauma.**

\*These can be added to a degree of alcohol dependence as well.

### Mx:

#### Non-pharm :

- continuing a strong doctor-patient relationship (since this can only be treated if the relationship is built on mutual trust).
- trauma-focused cognitive behavioural therapy.
- Eye Movement Desensitisation and Reprocessing (EMDR),
- stress management information,
- relaxation therapies
- addressing the alcohol dependence. → motivational interviewing, AA

**Pharm (2<sup>nd</sup> line)** - it is less useful for it to be mentioned at this point.

### What are risk factors for PTSD?

- Exposure to trauma or combat, refugee/asylum seeker status,
- first responder occupation,
- combat specific (duration of exposure, low morale, lower rank)
- poor social support,
- unmarried,
- low educational attainment,
- childhood adversity,
- previous psychiatric disorders.

### Is PTSD the same for everyone?

- No it is not.
- Some people may develop some form of it following an event which self-resolves in 6 months.
- Others will only develop one of the three key symptoms (Hypervigilance, flashbacks and rumination).
- There is also a cultural aspect to it which might lead to people presenting with medically unexplained symptoms rather than a direct psychological complaint.

### Which neurotransmitter is involved in the fight or flight response?

Adrenaline.

## #8: ACUTE PSYCHOSIS

### Summary:

28 year old female BIBA to ED after neighbour reports of disturbing behaviour where she was wearing only underwear and kangaroo hopping from house to house with witnessed self-talking and being pre-occupied with surrounding trees.

She reports auditory hallucinations for the past month (1/12) believing that the government is watching everyone and her every movement via the trees. These delusions have prompted her to stay indoors thus not going to work and if she does leave home, she pretends to act like a kangaroo to blend in with the trees to gain the tree's trust to avoid detection.

She cannot identify a clear trigger to when her behaviour changed but admits to not eating well.

Admits having dark suicidal thoughts but have never enacted upon them. Expressed command persecutory hallucinations from trees telling her to hang herself. She does not have any access to weapons or guns. Denies any intent to hurt others.

Ex-girlfriend left her 3/12 ago

Sx - feels fine, nil reportable

### PMhx

- Nil PMhx, Nil PPHx, nil regular meds
- Poor oral intake

### Social

- Lives in social housing in Gympie.
- Works in sales but has not been to work due to paranoia
- Smokes a pack of day for 10 years
- Nil alcohol use but occasional cannabis use to relax. Nil other recreational drug use
- Never had an STI screen

### FHx

- Father has depression

### MSE:

A 28 yo lady:

- **A, B** - appears unkempt, wearing worn clothes, disorganized, agitated not being able to sit in one place and paranoid with surrounding security cameras..  
She engages with intense eye contact.
- **Speech**
  - She speaks confidently and rapidly with poverty of speech, with frequent repetition of her words
- **Mood/affect** - Her mood is blunted (i.e. unable to express how they feel) and she displays blunted labile and congruent affect
- **Thoughts** - Her thoughts form a flight of ideas, tangential and occasional loose associations (talking random topics unrelated to questions). She also displays thought insertion believing that the security cameras in the room are delivering information into her mind.
- **Perception** - She reports having auditory hallucinations with delusions that messages are communicated from the government by the trees, which is how the government is watching everyone. These delusions have become more intimate with the belief that the government is trying to control her body.
- **Cognition** - She is disorientated to time, place and people and have poor self-awareness but an intact memory
- **Insight/Judgement** - Minimal insight and judgement to her current circumstances

### Formulation (how did they become like this?):

#### 1) Intro – Precipitating factors

A previously well and independent 28 year old female from social housing presents with a 1<sup>st</sup> episode of acute psychosis in the context of a recent relationship breakup 3/12 ago. She has no significant background medical or psychiatric history with no regular medications or substance abuse besides occasional cannabis use to calm her mood.

#### 2) Predisposing – Perpetuating factors

She has a genetic predisposition with her father suffering from depression which may led her to model his behaviour into developing low self-esteem, a withdrawn personality and possibly a lack of mature coping strategies when experiencing low mood or anhedonia.

Furthermore, her current low socio-economic status and accommodation in public housing may possibly have created an environment that has manifested into her current psychological state of social isolation and an inability to regulate her emotions. These financial and social pressures compounded recent breakup with her long-term girlfriend could be seen as potential contributing factors to her current psychosis which is manifested as auditory hallucinations, which can be seen as an immature coping mechanism to deal with precipitating and perpetuating stress and loss in her life. Her lack of social and family support and poor insight into her current condition is concerning and prevented the mitigation of this 1<sup>st</sup> episode of psychosis.

#### 3) Protective factors and prognosis

However, with careful exclusion of organic causes for her psychosis and careful and effective non-pharmacological behavioural management and counselling, I believe she will have a good prognosis to recover from her current situation and avoid further psychotic episodes.

### What are the risk factors?

- Commanding hallucinations
- Current suicide ideation /
- Previous suicidal thoughts, Suicide attempts
- Lack of social supports

### DDx of acute psychosis

- Acute psychosis
- Schizophrenia
- Schizoaffective
- Drug-induced psychosis
- Schizophrenia disorder
- Delusional disorder
- Cannabis use disorder
- Paretic neurosyphilis

\*For diagnosis of schizophrenia – need longitudinal observation since symptoms only present for a month (need to be 6/12 for formal dx according to DSM-V)

### What investigations should be done?

- FBC
- EUC/ CMP
- LFT
- TFT
- BSL, HbA1C
- Lipids
- Urine drug screen
- Non-contrast CTB or MRI
- ECG – check for prolonged QT (before starting anti-psychotic)
- EEG
- Septic screen if febrile → CXR, urine M/C/S, swab M/C/S, blood cultures

### What are acute behavioural managements?

- Non-pharm – verbal de-escalation, combined need for PICU admission
- Pharm – BZD (e.g. 5mg diazepam) PRN and regular anti-psychotic (e.g. risperidone, olanzapine, quetiapine)
- 

#### Other considerations

- Admit under MH act 2007 for ongoing assessment and treatment
- Discuss about substance abuse → motivational interviewing, anti-craving agents

### What if they have a bg hx of schizophrenia?

- Admit under MH act 2007 as also at RoSH
- Start atypical antipsychotic
- MRI
- ECG – check for prolonged QT
- General bloods for organic screen

# Challenging Patients: Case Scenarios

## Co-existence between mental health and co-morbidity

- **Most common comorbidity** was anxiety disorder **PLUS** physical condition, affecting around 1.4 million Australian adults
- comorbidity increased with decreasing socioeconomic status (SES)
- comorbidity group had the highest proportion of smokers
- 10 times as likely to report high levels of psychological distress
- more than 7 out of the past 30 days out of role

### Case 1

- Ms X is a 21 year old woman with a background history of Major depression and generalized anxiety disorder. She has been prescribed Amitriptyline 100 mg by her private psychiatrist since the beginning of 2018. Today she presents with an overdose of 25 tablets of her antidepressants in the context of recent stressors and ongoing depressive symptoms. She is agitated and behaviourally disturbed.
- As the junior registrar you are requested by the medical team to review this patient and "admit this woman"
- What is your initial approach and why?

#### Initial approach

1. Assess her mental state and admit her to the psychiatric ward
2. Administer IMI Haloperidol
3. Assess her safety risks and then admit her to a psychiatric unit
4. **Assess her safety risks, consider her potential side effects of an overdose of Amitriptyline on her mental state and request a medical review**  
**[BEST ANSWER - check suicidal risks, mental health act, duty of care, any more tablets or sharp objects on her]**
5. Medical review and request consultation liaison psychiatry to follow up

#### What are the potential risks with a TCA / amitriptyline overdose?

1. **Anticholinergic delirium** - fever, HTN, mydriasis, tachycardia, coma, ileus, hallucinations, agitation
2. Long QTc prolongation on ECG
3. Serotonergic side effects → ANS and CNS upregulated

### Case 2

- Mrs S is a 56 year old woman with Multiple Sclerosis and she presents with symptoms of mania and psychotic features. She is elevated in her mood, grandiose delusions of being god, has not slept for days, irritable and easily distracted with random thoughts.
- You have been asked to assess this woman and present a management plan for the medical team.
- What further information would you like to know prior to seeing her and why?

#### Further information needed?

1. Medications for MS - steroids (?acute psychosis)
2. ?any history of bipolar mood disorder
3. ?is she on any medications - compliant?
4. ?has she been on mood stabiliser?
5. ?any drug usage
6. ?is it delirium (check MMSE, MoCA) → does she have fluctuation in behaviour? → reversible causes

### Case 3

- Mr H is a 45 year old gentleman with a background history of Schizophrenia currently on a community treatment order and receives a monthly injection of Paliperidone for his illness. He was brought in by the police after being found to be agitated and confused at a shopping centre. He does not have a history of illicit substance use.
- He arrives at the ED, agitated, responding to external stimuli and behaviourally disturbed.
- The ED registrar and RN request that you review him immediately and admit him to the mental health unit

#### Initial approach

1. **Assess risk**
2. **Determining his**
3. **mental health act status**
4. Sedate him with antipsychotics or IV benzos and admit him to the mental health unit
5. **Assess his mental state and gather collateral information from his case manager and family members**  
**[BEST ANSWER- check safety 1<sup>st</sup> prior, ask family if there is sudden change in behaviour, check for organic causes- med compliance, other co-morbidities]**
6. Restrain him and get security to be present

#### His CM informs you he also has a history of Epilepsy and is not compliant to his antiepileptics. What do you do next?

1. Administer Haloperidol and admit him to the mental health unit
2. IV Phenytoin loading dose by the ED team and admit him to MH unit
3. Request a neurological review and ensure appropriate blood investigations have been taken; including blood levels of the various antiepileptics he is on. Consider either a medical or mental health admission after this has been done.  
**[BEST ANSWER- check for organic cause or if this is indeed a psychiatric cause]**
4. Neuro review then admit to the mental health unit

### Case 4

- Mrs J is a 49 year old woman with an established diagnosis of Schizophrenia on Zuclopentixol Depot 200mg 2 weekly. She is admitted to the neurological ward with severe dystonia.
- Name the common extrapyramidal side effects from medications.

#### Common treatment principles

- REMOVE/REDUCE Offending drug
- Clozapine - less D2 blocking
- Consider - 1<sup>st</sup> gen antipsychotic effect (haloperidol, chlorpromazine)

#### Specific treatment for EPSE - common for 1<sup>st</sup> gen atypical anti-psychotics

EPSE	Solution
Acute or chronic dystonia "sustained increased and painful tone"- <i>laryngospasm, upward eye movement (oculogyric crisis), trismus, lordosis, scoliosis, opisthotonos crisis (hypertext body)</i>	<b>RF:</b> male, young, 1 <sup>st</sup> gen anti-psych (haloperidol), stimulant use <ul style="list-style-type: none"><li>• IV/IM Benzotropine (anti-chol)</li><li>• 2<sup>ND</sup> LINE = BZD</li></ul>
Parkinsonian side effects- Tremors, Bradykinesia, Rigidity, reduced arm swing, shuffling gait "Simpson Angus side effect"	<ul style="list-style-type: none"><li>• Consider drug causes- change or reduce dose</li><li>• 2<sup>ND</sup> LINE = Benzotropine</li></ul>
Tardive dyskinesia (TD) (Involuntary movements - lip smacking, automatisms) → irreversible if chronic	<ul style="list-style-type: none"><li>• <b>Change of meds</b> - clozapine (best evidence)</li><li>• 2<sup>ND</sup> LINE = 2<sup>nd</sup> gen anti-psychotics</li><li>• <b>Other</b> = Tetrabenazine.</li><li>• Vitamin K, Gingko (low evidence)</li></ul>
Akathisia (inner feeling of restlessness) acute motor agitation, reversible) - <i>restless leg, rocking, pacing</i>	<ul style="list-style-type: none"><li>• BB, BZD, Mirtazapine</li><li>• Clozapine (best)</li></ul>
XS PrL (galactorrhea, amenorrhoea, <b>sexual dysfunction</b> )	<b>Discontinue and use Dopamine agonists (e.g. aripiprazole)</b>

