Medical aspects of Neurodevelopmental Conditions

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• 14.00 Welcome and introduction
• 14.05 Max
• 14.45 Mark
• 15.25 Panel discussion
• 15.55 Thanks and closing comments
• 16.00 Close of webinar
Objectives

• To cover the main conditions/disorders seen by Paediatricians and Psychiatrists within Neurodevelopmental Conditions and summarise the types of medications commonly used.

• (Not to cover how to assess)

• (Not to cover non-pharmacological treatments)
Physical health aspects of Neurodevelopmental Conditions

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ACAMH NDC sig Chair
Physical health in NDCs

• Neglected (esp in ID)
• Misunderstood
• Silo working
Assessment - taking a broad view

- Physical symptoms look different
- Psychological distress as physical
- Core symptoms of NDC vs. physical signs
- Different points of view
Some specifics
Neurological (well the bits that neurologists are interested in)

• Epilepsy and behaviour

• Physical disability and symptom

• Sensory modulation and pain
Gastro-Intestinal/ Urinary

• Constipation and interoception

• Soiling and mood

• Enuresis and distractibility
Resp/ ENT

• Snoring/ apnoea

• Communication and hearing

• Housing and breathing
Dermatological

• Neurocutaneous syndromes

• Eczema and sleep

• Acne and mood
Pain/ MSK

• Dental pain in ID

• Abdominal pain and anxiety

• Hypermobility/ MSK pain

• Exercise and moof
Sensory

• Hearing and communication

• Vision and attention

• Sensory modulation and ADHD
Endocrine

• Growth, care and genetics

• Puberty- not all about the hormones

• It’s probably not their thyroid
Nutrition

• Restricted diets and cultural expectation

• Feeding as a warzone (previous talk)

• Superfoods and miracle diets
Genetics

• Syndromes

• Genetic micro-changes

• Family history: the best tool?
Bloods?

- Iron deficiency and sleep
- Pica
- Vit D and bone pain
Sleep

- Previous talk in NDC series
- No magic number
- Sleep associations
- Melatonin- the sometime switch
‘Physical Health’ medications and Mental Health/NDCs

• Side effects
  • Epileptic meds
  • Asthma meds
  • Steroids

• Cautions
• Contraindications
• Interactions
Psychiatric Aspects of Neurodevelopmental Conditions

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Psychiatrist/Non-Medical Prescribers

• Role of the Psychiatrist/NMP (within an MDT)
• Expertise/training
• After comprehensive Psychiatric history, physical if needed, tests if needed, MDT assessments...
• Diagnosis (ICD/DSM) vs formulation (Bio-Psycho social/6P) vs needs based plan
• Mental Health/NDC/Behavioural Treatments- (Bio)
• NB not everything has a pharmacological treatment
# Bio-Psycho-Social vs 6Ps

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Assessments

- Principles- holistic
- Modifications:
  - understanding how a mental health disorder may present in the presence of a NDC
- Reasonable adjustments
- observation
- Parents/carers/professionals vs child info
- Symptomatology may be masked, different or more biological than psychological
- Separating out mental health symptoms from core symptoms of the NDC
- Diagnostic overshadowing
Mental Health

- Anxiety - particularly change/transition/fear of the unknown, PTSD, ICD, phobias, generalised
- Mood - depression/bipolar
- Eating disorders incl PICA and ARFID
- Psychosis - schizophrenia
- Conduct disorders (aggression, refusal, breaking rules)/ Behaviour that challenges
- Catatonia eg in ASD
- Complex Trauma
- Attachment
- Bereavement/loss
- adjustment reactions to events/triggers
- Gender identity
- Forensics
Psychiatric Treatments

- Principles: no different to treating others - use the evidence base, guidance, licensing where possible
- Modifications: reasonable adjustments
Psychosis- pharmacological Treatments

• Antipsychotics
• Oral
• IM
• Monitoring
• BP, Pulse, Height, weight, ECG, bloods (FBC, U&E, LFT, Fasting Glucose, lipids, HBA1C,
• Prolactin
• WBCs- Clozaril
Mood disorders

• Depression
• Antidepressants

• Bipolar
• Mood stabilisers
• Antipsychotics
• Antidepressants
Anxiety (PTSD, OCD, Generalised)

- Anxiolytics
- SSRIs
- Betablockers
- Benzodiazepines/other sedatives
Eating Disorders

• SSRIs- mood, anxiety components
  • Antipsychotics- hyperarousal

• Medications/supplements for malnutrition

• Feeding Disorders
  • NB Iron and PICA
Medical options for hyperarousal as a symptom

- Sedating agent:
  - Antihistamine - eg promethazine
  - Benzodiazepine eg lorazepam, diazepam
  - Antipsychotic eg Risperidone, Aripiprazole

- NB short term license for Risperidone for severe aggression in ASD or CD
Hyperarousal as symptom

- Awareness of duration of the hyperarousal - may settle before a PRN treatment would help
- Frustration
- Anger
- Aggression
- What is the meaning of the behaviour? Communication, understanding, upset, sensory driven...

- Sometimes you have not identified a cause, or the cause can’t be treated or treating the cause is taking too long - to manage risk/reduce distress you may need to treat the symptom.
Remember for Behaviour That Challenges management:

• Often Socio-psycho-bio
• Bio-psycho-social (only when a clear physical/mental health cause is identified)
Clinical experience

• The more experienced and skilled the MD/MA team are, reduces the likelihood of prescribing solely for the symptom of hyperarousal.

• Need for good social support- respite, activities
• Good educational support
• Good support for parents/carers
• A skilled team in understanding PBS, attachment, communication, sensory, physical and mental health identification.
‘Mental Health’ medications and Physical health/NDCs

• Side effects (epilepsy, tics, + multiple other physical side effects)

• Cautions:
• Contraindications
• Interactions
Overlap Aspects (Paediatric/Psychiatric)

- NDCs
- Somatisation/Dissociation
- Medically unexplained symptoms
- Catatonia
- Eating Disorders/Feeding Disorders
- Gender Identity
- Chronic fatigue
- Regression
- Co-working
Assessments- NDCs

• Principles- holistic
• Modifications:
  • understanding how an NDC may present in the presence of another NDC
• Reasonable adjustments
• History/Observation/tests
• Parents/carers/professionals vs child info
• Symptomatology may be masked or resemble another NDC
• Diagnostic overshadowing
Neurodevelopmental conditions (NDCs)

• Differential Diagnoses/Co-occurring conditions:
  • ADHD- impulsivity, attention, hyperactivity (emotional regulation, frustration)
  • ASD- social communication, repetitive behaviours (aggression, self injury, emotional regulation)
  • ID/LD- IQ, adaptive behaviours (understanding, skill sets)
  • Tics- motor, vocal (social acceptance)
  • Specific Learning Difficulties eg Dyslexia, Dyscalculia
  • Language Disorders
  • Motor Disorders
NDCs

• Each NDC increases the chances of others being present
• Important to assess for more than just 1
• Important to identify and treat
• More important to assess and meet needs
• Acknowledge that diagnoses are sometimes needed eg- evidence base, collective understanding, access to services.
NDCs with pharmacological treatments (most don’t)

• **ADHD:**
  • Stimulants (methylphenidate I/R, M/R, Dexamphetamine, Lis-Dexamphetamine), Atomoxetine, Guanfacine
  • Monitoring- BP, Pulse, Height, weight
  • NB Iron deficiency and ADHD

• **Tics/Tourettes-:**
  • Antipsychotics-
    • Risperidone, aripirazole, Haloperidol
  • Monitoring BP, Pulse, height, weight, ECG, Bloods (FBC, U&E, LFT, Fasting Glucose, Lipids, HBA1C, Prolactin)
  • Clonidine (Guanfacine in ADHD + tics)
  • Monitoring BP
Catatonia in ASD

• Benzodiazepines (may need high doses)
• Cautions
• (SSRIs)
• (Antipsychotics)
Regression

• ASD
• Retts
• Epileptic encephalopathy and other neurodegenerative disorder
Somatisation/Dissociation

• Somatisation is when a psychological issue is presented in a physical manner eg stomach ache in anxiety
• treatment is psychological/psychiatric after physical health ruled out

• Dissociation – a psychological process where an individual is disconnected from their thoughts, memories, feelings, sense of identity or reality
• May be part of another mental health disorder/distress/post-trauma
• Treatment is psychological (occasionally physical health may need ruling out eg epilepsy)
Medically Unexplained symptoms

• Can overlap with Dissociation and Somatisation
• Need to rule out physical cause
• Treatment may be psychological (may include medication if mental health disorder identified)
• Eg non-epileptic ‘seizures’, chronic pain
• NB sometimes can occur at the same time as a physical condition eg epilepsy
Gender Identity

- Pharmacological aspects- hormones (blockers/substitutions)
- (Surgery)
Chronic fatigue

• May have physical and mental health components

• Treatments- see NICE guideline 2021 (NG206)
• Management, no cure, energy/pain/fluid/diet/psychological management
• No medications.
• Caution- other medications may need lower doses
General Principles of prescribing
TREAT THE CAUSE!

• Otherwise you are allowing the cause to continue- ethics!
• Go earlier in a chain: eg trigger-anxiety-anger
• You need to have looked thoroughly for a cause 1st
• Physical interventions may not be just medication
• Psychiatric interventions may not be just medication
• If treatable side effects, treat them too, or change medications
Considerations - Why?

• STOMP-STAMP campaign
• Effects - what do we want it to do?
• Side effects (of the medication, of the effect, sedating agents may lead to inhibition)
• Evidence base - the research
• Licensing - eg Risperidone has a short term license for serious aggression in ASD or Conduct Disorder (becomes off license after 6 weeks)
• Guidance eg NICE, CBF, Maudsley
Considerations- Who?

• Who is this treating?
• Who does it benefit?
• Preferences- of the person, parents etc

• Who should assess?
• Who should treat?
Considerations- What?

• Choice of medication type
• Choice of specific medication
• Available preparations- dose options, liquids, tastes, ability to swallow tablets
• Awareness of doses, rate of change, monotherapy, side effects, interactions.
Considerations- Where?

• Specific to situations/locations eg home vs school,
Considerations- When?

• Duration of action- PRN vs regular (pros and cons)
• When to start
• When to stop
• How long for?
• Exit strategy?
• Timings- over the day, over the week, weekends, holidays
Considerations - How?

- How will we know if it’s worked?
- Balance of risks- to the person, to others
- Ability to monitor for harm?
- Difficulties with getting blood tests, blood pressures, ECGs etc
- Legislation- children act, mental capacity act, mental health act
Conclusions

• Paediatrics and Psychiatry are interlinked
• NDCs commonly overlap with other NDCs, Physical, mental health and behavioural conditions
• Both have a role to play in the assessment and treatment of NDCs and their co-occurring conditions
• Keep an open mind for other conditions
• Adapt/reasonably adjust
• STOMP-STAMP
• Go low, start slow and monitor lots
• Remember- safeguarding/safety
• The ‘medical model’ is only part of the picture.