Conduct disorder: key comorbid conditions and biological risk factors

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Outline of presentation

1. Conduct disorder: definition
2. Key comorbid conditions: definition
3. Key biological risk factors
"Hello, Emily. This is Gladys Murphy up the street. Fine, thanks ... Say, could you go to your window and describe what's in my front yard?"
1. **Conduct disorder: definition**

Diagnostic nosology-some comments:

DSM-IV definition of a mental disorder-
A mental disorder is conceptualized as

a clinically significant

*behavioural pattern* that occurs in an individual
and
is associated with *impairment* in
one or more areas of functioning
1. Conduct disorder: definition

Diagnostic nosology-some comments

in children and adolescents-

impairment is *developmentally inappropriate*,
judged relative to children of the same age, gender and IQ
in social, academic, occupational or other important areas
of functioning

*multi-informant* reports required

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1. **Conduct disorder: definition**

The Spectrum of Antisocial Behaviour (Steiner, 1999)

- antisocial behaviour
- criminality and delinquency
- antisocial behaviour and psychopathology
- persistent conduct problems
- conduct disorder

- psychopathy
1. **Conduct disorder: definition**

Oppositional defiant disorder (ODD)

-a recurrent pattern of negativistic, defiant, and hostile behaviour
-onset usually before 7 years of age
-usually first emerges in the home setting
-always a precursor for Conduct disorder (approximately 3% of children with ODD develop CD)
-prevalence (2%-16%) have been reported (Loeber et al. 2000)

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1. Conduct disorder: definition

Conduct disorder (CD)

-repetitive and persistent pattern of behaviour in which the basic rights of others and/or major age-appropriate norms or rules are violated, evidenced by three or more of the following criteria within the previous 12 months, with at least one criterion present in the past 6 months:
-Serious violations of social rules/norms
Theft
Destruction of property
Aggression/Cruelty towards people and/or animals

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2. **Conduct disorder: key comorbid conditions**

**COMORBIDITY of ODD/CD**

- alcohol/substance abuse/dependence disorders
- ADHD, combined type,
- language learning difficulties/disorders
- anxiety disorders
- depressive disorders
- speech/language disorders
- developmental coordination disorder
- autistic spectrum disorders
- bipolar disorder

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2. **Conduct disorder: key comorbid conditions**

-alcohol/substance abuse/dependence disorders

increasingly common in adolescence

- type depends on local availability in society
- strong family history
- increases with increasing comorbidity

- dual diagnosis services are necessary

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2. Conduct disorder: key comorbid conditions

- ADHD, combined type

perhaps the most significant comorbid disorder
a major driver for further comorbid conditions
clear biological antecedents

variable response to medication can facilitate
other psychosocial interventions

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2. Conduct disorder: key comorbid conditions

- language learning difficulties/disorders

  reading, spelling, arithmetic and writing domains
  strong heritability
  primary effects via shared risk factors (eg EF deficits)
  secondary effects via problems of adaptation

educational remediation is necessary

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2. Conduct disorder: key comorbid conditions

- anxiety disorders

  separation anxiety/social anxiety/generalised anxiety disorders
  moderate heritability
  primary effects via shared risk factors (eg EF deficits)
  secondary effects via problems of adaptation

  psychosocial interventions may be most helpful

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2. **Conduct disorder: key comorbid conditions**

- depressive disorders

  dysthymic, major depressive disorders
  often preceded by anxiety disorders
  moderate heritability
  primary effects via shared risk factors (eg EF deficits)
  secondary effects via problems of adaptation

  medication and/or psychosocial interventions
  may be most helpful
2. **Conduct disorder: key comorbid conditions**

- speech/language disorders

  articulation, grammar, syntax, semiotic domains
  strong heritability
  primary effects via shared risk factors (eg EF deficits)
  secondary effects via problems of adaptation

  speech therapy is necessary

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2. **Conduct disorder: key comorbid conditions**

- developmental coordination disorder

  fine and gross motor domains  
  strong heritability  
  primary effects via shared risk factors (eg EF deficits)  
  secondary effects via problems of adaptation

  occupational therapy is necessary

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2. Conduct disorder: key comorbid conditions

- autistic spectrum disorders

increasingly recognized as significant comorbid conditions, especially when explosive aggression prominent
primary effects via shared risk factors (eg EF deficits)
secondary effects via problems of adaptation

medication and/or psychosocial interventions may be most helpful

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2. Conduct disorder: key comorbid conditions

- bipolar disorder

controversial diagnosis pre-puberty
increasingly recognized as significant
comorbid conditions, especially when
explosive aggression prominent
primary effects via shared risk factors (eg EF deficits)
secondary effects via problems of adaptation

medication and/or psychosocial interventions
may be most helpful

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3. **Conduct disorder: Key biological risk factors**

- lower verbal/performance IQ;
- hypo-arousal; hyper-arousal;
- irritability;
- executive function deficits especially response inhibition and working memory

- comorbid alcohol/substance abuse/dependence disorders

- NB: within-individual factors have to be considered in the interpersonal context (for example, ‘chaotic’ family factors)
3. Conduct disorder: Key biological risk factors

- Verbal: visuospatial IQ

relatively diminished ability to label feeling states and develop internal coping strategies
3. **Conduct disorder: Key biological risk factors**

![Graph showing relationship between Prefrontal cortex function and Arousal level]

- Prefrontal cortex function
- Arousal level

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3. Conduct disorder: Key biological risk factors

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3. Conduct disorder: Key biological risk factors

Arousal dysregulation: optimise physiological arousal
optimise habituation

Mood dysregulation: decrease irritability
increase emotional salience
3. Conduct disorder: Key biological risk factors

- Executive functioning deficits

  Response disinhibition: motor and cognition
  
  optimise response speed and accuracy

  Working memory deficits: verbal and visuospatial
  
  optimise span and strategy
FIGURE 8.1 The prefrontal, parietal, and temporal association cortices form interconnected networks that play complementary roles in attentional processing.
Figure 16.1. Central organisation of the frontal–subcortical circuits.

Figure 16.2. Organisation of the frontal–subcortical circuits (see also Cummings, 1993). (NB: indirect circuits of the substantia nigra and subthalamic nucleus are not shown.)
“All right, Billy, you just go right ahead! . . . I've warned you enough times about playing under the anvil tree!”
Summary

- spectrum of ODD → CD

- within-individual biological risk factors are important
  - arousal dysregulation
  - mood dysregulation
  - executive dysfunction

- these factors contribute to onset and progression of key comorbid disorders: depressive disorders and ADHD

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Summary

- medication can aid a child’s ability to invest in a psychosocial treatment program and learn from this program

- usually use medication for 1-2 terms with thorough re-review every 6-12 months because of development