Tics

Definition / Supporting Information

Tics are recurring, non-rhythmic, sudden, rapid, stereotyped, involuntary movements or vocalisations, tics may be classified as motor or vocal and as simple or complex. Tics may move from one muscle group to another and change their form at irregular intervals.

Most tics last only a few weeks and (if isolated and transitory) are common, occurring in as many as 24% of 6 and 7 year olds. Boys are affected more than girls. Tic severity peaks at age 10 to 12 years and prevalence drops sharply after age 13 years; tics that persist into later adolescence are more likely to become chronic.

- The most common simple motor tics are:
  - Eye blinking
  - Neck twisting
  - Shoulder shrugging
  - Grimacing
- The most common simple vocal tics are:
  - Coughing
  - Throat clearing
  - Sniffing
  - Grunting
- Complex motor tics include more sustained, orchestrated, or seemingly purposeful gestures
  - Touching, stomping on, or sniffing objects
  - Jumping
  - Sustained dystonic movements
  - Copropraxia (obscene gestures)
  - Echokinesis (automatic imitation of another person's movements)
- Complex vocal tics include:
  - Sudden changes in volume or prosody
  - Syllables, words, or stock phrases spoken out of context
  - Palilalia (repeating one's own words)
  - Echolalia (repeating the words of others)
  - Coprolalia (uttering obscenities)

Essential History

Ask about:

- If possible review a video and seek an eyewitness account
- Stereotypical nature
  - Sniffing
  - Coughing
  - Throat clearing
- Variability over time
  - Tics wax and wane in intensity and frequency
  - One tic disappears, and a new one takes its place
- Transient suppressibility
- Premonitory urges
  - Tension or unpleasant sensation ‘building up inside’
- Stress, anxiety or excitement
  - Often exacerbate tics
- Drugs, may produce or exacerbate tics and include:
  - Antihistamines
  - Methylphenidate hydrochloride
  - Theophylline
  - Caffeine
  - Beta-agonists (salbutamol)
  - Phenytoin
  - Tricyclic antidepressants (eg, amitriptyline hydrochloride)
  - Cocaine
  - Amphetamines
- Awareness of tics
  - Tics are often transiently suppressible with effort
  - This usually results in an increased urge to perform the tic
    - Some consider the effort to suppress tics in social situations as burdensome as the tic
- Family history of tics and / or Tourette’s syndrome (TS)

‘Red Flag’ Symptoms and Signs

Ask about:

- Delayed developmental milestones
  - Consider cerebral palsy
- Parental mental or physical health problems
- Depression

- Self-harm

Look for:

- Evidence of self-harm
- Any abnormality on detailed neurological examination

Differential Diagnosis / Conditions

- Tourette's syndrome (TS)
  - An inherited, neurological condition, the key features of which are tics; involuntary and uncontrollable sounds and movements
  - Tic disorder lasting for 1 year or longer
    - Any remission lasting less than 3 months
  - Tendency for tics to improve or disappear in later adolescence
- Psychiatric disorders
  - Should be distinguished from psychological or stress factors because of severity
  - Tics may be associated with:
    - Autism
    - Attention-deficit hyperactivity disorder (ADHD)
    - Obsessive-compulsive disorder (OCD)
    - Although most tics improve by late adolescence, OCD or ADHD symptoms may persist
- Stereotypies or self-stimulating behaviours, such as rocking, head banging, flapping, or spinning
  - Stereotypies are bothersome to parents but not to the child
    - The child finds them pleasurable and resists adult attempts to interrupt them
    - Contrasts with intrusive, bothersome and disruptive nature of tics
  - Self-stimulating movements:
    - Mostly occur at times of boredom or excitement
    - Rarely disrupt co-ordinated movements
    - Persist without much change in form or location
- Cerebral palsy
- Chorea (eg, Huntingtons)
  - Centripetal (central) location of movements
  - Repetitive form
  - Normal muscle tone
- Epilepsy
  - Particularly simple focal seizures and myoclonic jerks

Treatment Approach

To be undertaken by non-specialist practitioners (eg, General Practitioner (GP) Team):

- Most tics in children are:
  - Mild
  - Short lived
  - Do not require treatment
  - Unlikely to respond to punitive parenting. They are involuntary; parents and teachers should be encouraged to accept the tics and try not to draw attention to them.
- The possible role of any current medications should be considered
  - Removal or reduction of the medication may be the required treatment
- Once a tic has persisted for several months, treatment may be considered, if the tic is:
  - Conspicuous
  - Disabling
  - Distressing to the child
  - Worsening
- No treatment for tics is:
  - Simple
  - Entirely effective
  - Free of side-effects
- Pharmacotherapy
  - Only physicians thoroughly familiar and experienced with the drugs indicated in children with tics should undertake pharmacotherapy.

To be undertaken by specialist practitioners (eg, General or Community Paediatric / Psychology / Mental Health Team(s)):

- Behavioural techniques:
  - Habit reversal therapy
    - Best carried out by a psychologist who is experienced in the technique and used to working with children
  - Exposure with response prevention
    - Exposure to overwhelming unpleasant feelings that are often experienced just before a tic
  - Anxiety reducing and supportive interventions
    - Relaxation training and biofeedback are not of proven value in treating tics
- Acceptance interventions:
  - Explain to parents, teachers, and peers that the tics are a physical problem and the child cannot help them.

  - Acceptance of both the child and tics is the kindest, safest, and simplest way to deal with them.
  - Peer problems can be a major difficulty for children with tics and TS.
    - Collaboration with school staff to reduce peer teasing and stigmatisation is a major therapeutic task.

When to Refer

Refer to specialist practitioners (eg, Paediatric / Mental Health Team(s)) if:

- Any 'red flag' signs or symptoms
- Tics associated with additional evidence of a psychiatric disorder
  - Autism
  - ADHD
  - Generalised anxiety
  - OCD
- Chronic or recurrent tics that seem to have a clear relationship to stress
  - Psychosocial interventions may be helpful
- Chronic, disabling, or discomforting tics for which differential diagnosis or treatment is needed
- Psychoactive drugs may be indicated
  - Antipsychotics (neuroleptics)
  - Clonidine hydrochloride

'Safety Netting' Advice

Advise patient, parent, family, and teachers that whilst tics are generally benign:

- Children with tics and especially TS can experience related problems of self-image when adult criticism and peer rejection result.
- Persistent tics are associated with an increased risk of comorbid ADHD.
- Individuals with TS are also at risk for mental illness.

Patient / Carer Information

Please note: whilst these resources have been developed to a high standard they may not be specific to children.

- Tics (Web page), the NHS website
- Tourette's syndrome (Web page), the NHS website
- Tourette's syndrome (Web page), Patient
- Attention deficit hyperactivity disorder (ADHD) (Web page), the NHS website
- Autism spectrum disorder (Web page), the NHS website
- Obsessive–compulsive disorder in children and young people (Web page), Patient

Resources

National Clinical Guidance

Attention deficit hyperactivity disorder in children and young people (Web page), NICE pathways, National Institute for Health and Care Excellence.

Attention deficit hyperactivity disorder: Diagnosis and management of ADHD in children, young people and adults (Web page), NICE clinical guideline CG72, National Institute for Health and Care Excellence.

Autism diagnosis in children and young people: Recognition, referral and diagnosis of children and young people on the autism spectrum (Web page), NICE clinical guideline CG128, National Institute for Health and Care Excellence.

Suggested Resources

Please note: these resources include links to external websites. These resources may not have national accreditation and therefore PCO UK cannot guarantee the accuracy of the content.

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King RA, Scahill L, Lombroso P. Psychopharmacological treatment of chronic tic disorder. In: Martin A, Scahill L, Charney D, eds. Pediatric Psychopharmacology: Principles and Practice. New York, NY: Oxford University Press; 2003.

Kurlan R, ed. Handbook of Tourette's Syndrome and Related Tic and Behavioral Disorders. 2nd edn. New York, NY: Marcel Dekker; 2005.

Mills S, Hedderly T. A guide to childhood motor stereotypies, tic disorders and the tourette spectrum for the primary care practitioner Ulster Med J 2014;83(1):22–30.

Roessner V, Plessen KJ, Rothenberger A, et al.; and ESSTS Guidelines Group. European clinical guidelines for Tourette syndrome and other tic disorders. Part II: pharmacological treatment. Eur Child Adolesc Psychiatry 2011;20(4):173–196. Erratum in: Eur Child Adolesc Psychiatry 2011;20(7):377.

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Spessot AL, Peterson BS. Tourette's syndrome: a multifactorial developmental psychopathology. In: Cicchetti D, Cohen DJ, eds. Developmental Psychopathology 2nd edn. Vol 3. Hoboken, NJ: John Wiley & Sons; 2006.

Tics, Tourette syndrome, and OCD (Web page), American Academy of Pediatrics.

Tourettes Action (Web site).

Walkup JT, Mink JW, Hollenbeck PJ, eds. Advances in Neurology. Vol 99: Tourette's Syndrome. Philadelphia, PA: Lippincott Williams & Wilkins; 2006.

Woods DW, Piacentini JC, Walkup JT, editors. Treating Tourette Syndrome and Tic Disorders: A Guide for Practitioners. New York: The Guilford Press; 2007. pp. 154–184.

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