

CBIT – a primer for non-therapists

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SickKids[®]

| Garry Hurvitz Centre for
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Tourette
OCD 
Alberta
Network

Disclosures

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Learning Objectives

1. To provide **psychoeducation** about TS
2. Describe the **evidence** for behavioural therapy for TS
3. To **pursue** comprehensive behavioural intervention for tics

Case

- 7 yo boy, lives with parents, 5 yo sister; grade 2, marks average
- RFR: repetitive eye blinking, facial and head movements

What is your approach?

Tics

Motor & phonic

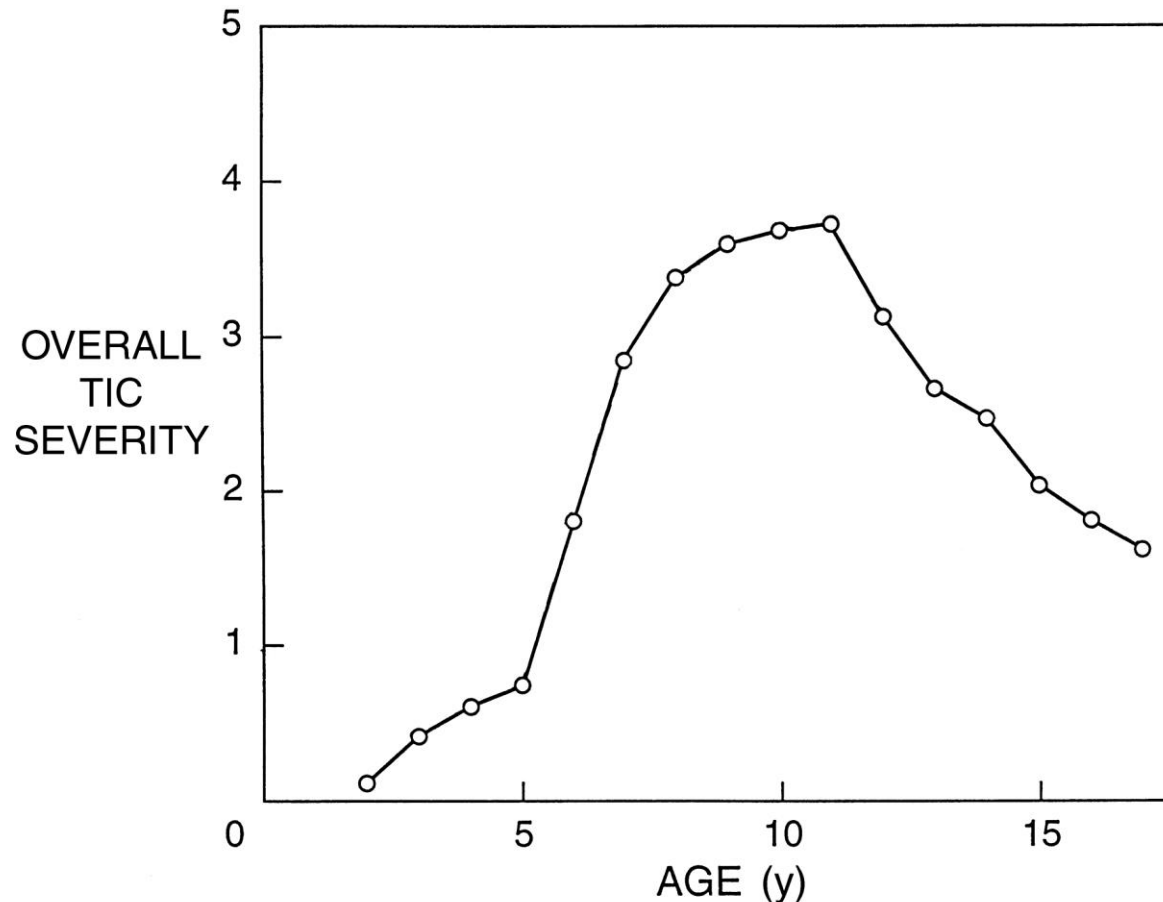
- ‘Involuntary’ movements or vocalizations
- Stereotyped, repetitive, nonrhythmic
- Simple or complex
- Premonitory urge
- Usually temporarily suppressible
- Wax & wane
- Worse with stress, fatigue

Robertson et al, 2017; Martino & Mink, 2013; McNaught & Mink, 2011

Keep your eyes open

Course

Tic severity **peaks** ~ age 11, gradual decrease thereafter for most



*Modified from
Leckman et al, 1998*

Robertson et al, 2017; Groth et al., 2017; Martino & Mink, 2013

Management Overview

- Education and reassurance
- Behavioural Tx – CBIT
- Pharmacotherapy – α_2 -agonists, antipsychotics
- Comorbidities – OCD, ADHD, others

Case

- 7 yo boy, lives with parents, 5 yo sister; grade 2, marks average
- Parents very concerned, sister tells him to stop, peers at school imitating his vocal tics

What is your approach?

First-line Treatment for TS is Education & Support

- Family
- School
- 5 things to know about TS <https://www.cmaj.ca/content/185/3/236>
(Abi-Jaoude & Gorman, 2013)
- Tourette Canada tourette.ca; TAA tourette.org
- The Brake Shop
 - <https://leakybrakes.ca/brake-shop/brake-shop-clinic-resources/>
 - https://leakybrakes.ca/files/7216/1400/6844/11._Putting_the_Brakes_on_Tics.pdf

Andr  n et al., 2021; Murphy et al, 2013; Verdellen et al, 2011

Accommodating Tics

- Accept/ignore minor tics
- Accommodate for other tics where possible:
 - Small rug under desk for tapping foot
 - Cup for spitting
 - Tennis balls on legs of chair to minimize sound of banging
 - Saying Ferrari instead of F@(#(\$_!
- Involve the child in problem solving
- Graceful exits
- Encourage accountability through restoration and reparations

Case

- 11 yo
- Head shaking causing neck discomfort, interrupting his reading, loud humming tic interfering with speech and disruptive in class

What is your approach?

Potential Consequences of Tics

- Can cause **physical** pain or discomfort
- Can be physically tiring
- Can interfere with **function**
- Can be **socially** disruptive
- Interference with **sleep**
- Can affect sense of **self**
 - Lack of control
 - “it’s annoying”
 - “Something is wrong with me”

Second line treatment for TS is
HRT-based behavioral therapy

Recommended as first line targeted
treatment for tics by all guidelines

*Andrén et al., 2021; Pringsheim et al, 2019; Steeves et al, 2012;
Verdellen et al, 2011*

Comprehensive Behavioural Intervention for Tics (CBIT)

- Habit Reversal Training (HRT)
- Functional intervention
- Reward system?
- Relaxation training

Sukhodolsky et al, 2017; Peterson et al, 2016; McGuire et al, 2014; Wilhelm et al, 2012; Piacentini et al, 2010

A Brief History of Tx in TS

- Psychoanalysis
- Haloperidol, Seignot (1961) – psychopharmacology
- HRT
 - Nathan Azrin and R. Gregory Nunn (1973)
 - Duncan McKinlay – The Brake Shop, “Nix Your Tics”
 - Doug Woods, John Piacentini
 - Early skepticism

CBIT vs Supportive Tx

RCT, observer blind, 10 weeks, 6 months

Piacentini et al, 2010

- 126 **children**, ages 9-17
- YGTSS effect size 0.68; CGI-I 52.5% vs 18.5%, **NNT=3**
- 87% of available responders maintained benefit at 6 months

Wilhelm et al, 2012

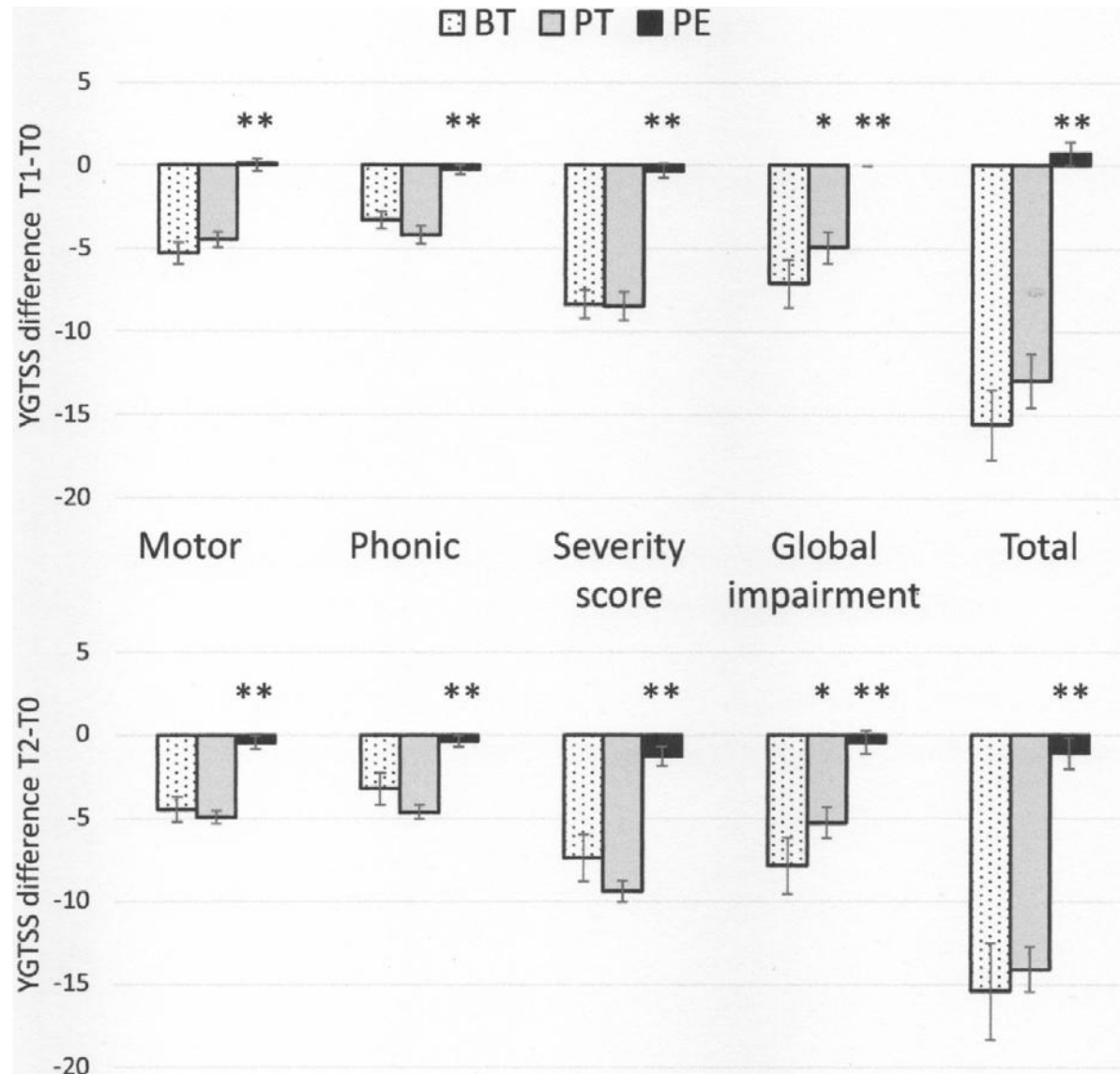
- 122 **adults**, ages 16-69
- YGTSS effect size 0.57; CGI-I 38.1% vs 6.8%, **NNT=5**
- 80% of available responders maintained benefit at 6 months

Behavior Therapy vs. Antipsychotic vs. Education

112 children, ages 8-17,
randomized to

- Antipsychotics (n=57)
- Behavior Therapy (n=26)
- Education (n=29)

*Rizzo et al,
2018*



Moderators and Predictors

No impact of ADHD, OCD, age, or sex

Tic severity at baseline predicted greater tic reduction

Sukhodolsky et al, 2017

Summary of CBIT Findings

- Robust effect size
- Treatment gains durable
- Attrition low
- Symptom reduction similar to meds
- Effective for high tic severity
- Effective with virtual delivery

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Habit Reversal Training (HRT)

- Awareness training
- Competing response (“tic blocker”)
- One tic at a time
- Generally start with most impairing
- Social support

Sukhodolsky et al, 2017; Peterson et al, 2016; McGuire et al, 2014; Wilhelm et al, 2012; Piacentini et al, 2010

In Practice...

- Session 1 – Intro
 - Pysched re TS
 - CBIT rationale, overview
- Session 2
 - Tic hierarchy tracker
 - Tic awareness training
 - Functional assessment

...In Practice

- Session 3
 - Tic consequences hierarchy tracker
 - HRT
 - Functional interventions
- Session 4-10
 - Practice, practice, practice
 - Relaxation training
 - Increasing autonomy
- Sessions 11-12 – booster

CBIT Resources

- “Managing Tourette Syndrome: A Behavioral Intervention for Children and Adults Therapist Guide”, by Dr. Douglas Woods *et al*
- “Nix Your Tics”, by Dr. Duncan McKinlay
- CPRI Tic Management Toolbox:

<https://leakybrakes.ca/brake-shop/brake-shop-virtual-clinic/tic-management-toolbox/>

- FIU Effective Child Therapy

<https://effectivechildtherapy.fiu.edu/course/view.php?id=39>

- Tourette OCD Alberta Network

<https://events.ucalgary.ca/cumming/tourette-ocd-alberta-network/all/tags/health%20care%20professionals>

- TAA

<https://tourette.org/research-medical/behavioral-therapy-institute-cbit-trainings/>