Obsessive Compulsive Disorder

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In the spirit of Truth and Reconciliation,
the Cumming School of Medicine acknowledges:

that we live, work and play on the traditional territories of the Treaty 7 Region in southern Alberta and the City of Calgary is also home to Métis Nation of Alberta, Regions 5 and 6.

We recognize the Indigenous people who for generations have been the traditional keepers of these lands.

We acknowledge health and educational disparity, and we commit to responding to the Calls to Action detailed within the Truth and Reconciliation Commission of Canada's report.

EMPIRE

The Life, Legend, and Madness of Howard Hughes

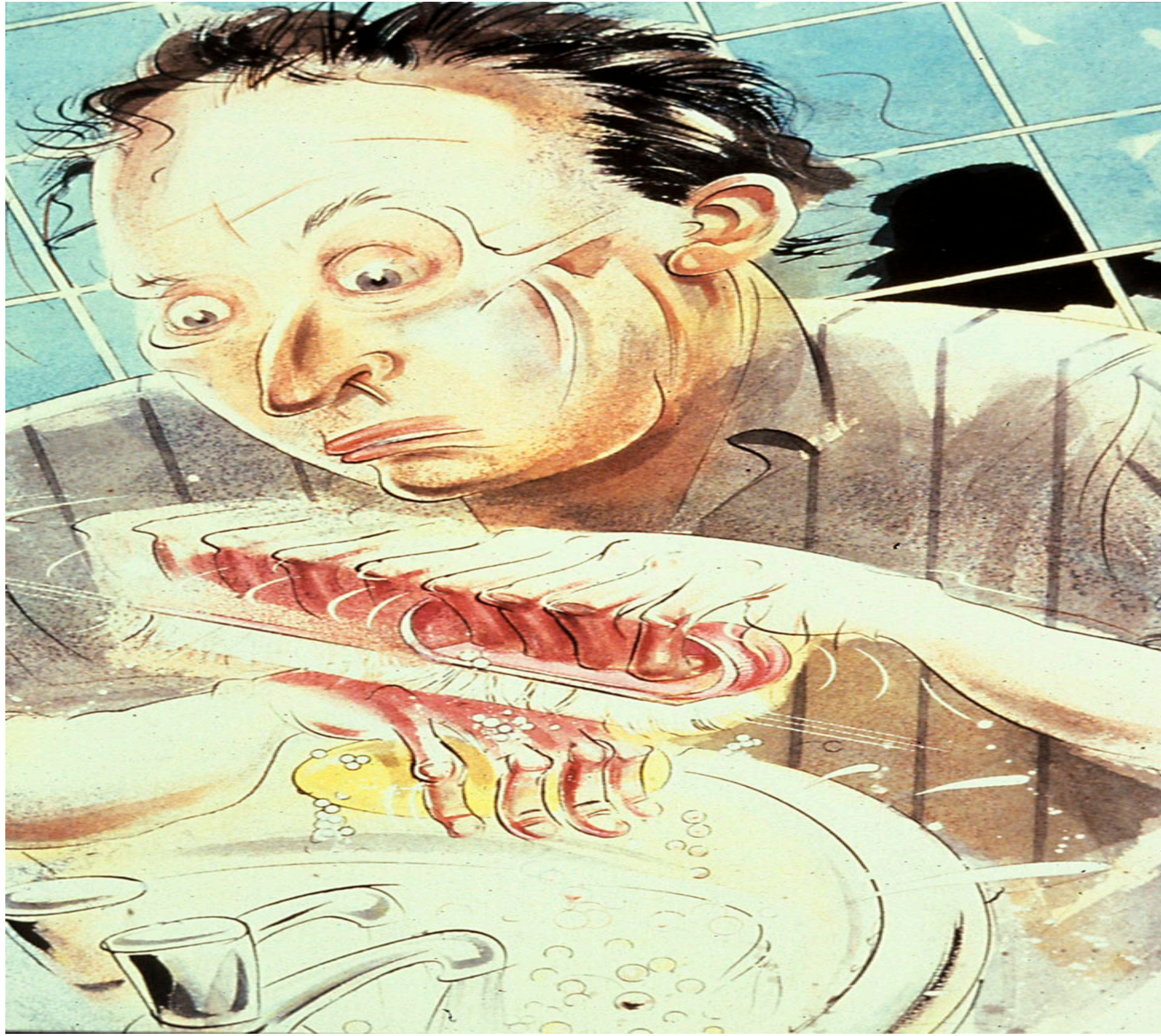
ld L. Barlett

General Information

- affects 2 % of the general population
- mean age of onset 20 $\pm$ 9 years
- 65% have symptoms before the age of 25
- < 20 % of patients have periods of remission and 10 % may have a progressive, deteriorating course
- Significant genetic contribution to OCD
- comorbidity with OCD: major depressive disorder, anxiety disorders (panic disorder, social phobia), attention deficit hyperactivity disorder, eating disorders, OCPD or other Cluster C personality disorders (avoidant, dependent)
- 20% of patients do not respond to the first drug prescribed

OCD Symptom Clusters

1. **contamination by dirt/germs**
   - most common obsession
   - accompanying compulsion is washing
2. **checking**
   - obsessed with doubt
   - try to enlist help of family/friends
   - undoing rituals – count to a certain number, repetitive actions
3. **pure obsessions**
   - repetitive intrusive thoughts
   - usually somatic, aggressive, sexual; always reprehensible to the thinker
4. **obsessional slowness**
   - objects/events in a certain order/position



DSM-V

A. Either obsessions or compulsions, or both:

Obsessions:

1. Recurrent/persistent thoughts, urges, or images that are intrusive and cause anxiety/distress
2. Individual attempts to ignore/suppress them or neutralize with a thought/action (compulsion)

DSM-V continued

A. Either obsessions or compulsions, or both:

Compulsions:

1. Repetitive behaviors (hand washing, ordering, checking) or mental acts (praying, counting, repeating words silently) this person is driven to perform in response to an obsession
2. The behaviours are to reduce distress or prevent an event yet are not connected realistically or are excessive

DSM-V continued

B. The obsessions or compulsions cause distress, are time-consuming (>1 hr/day) and interfere with the person's functioning.

C. Symptoms not attributable to a substance or medical condition.

D. Symptoms not explained by another mental disorder (i.e. GAD, BDD, Hoarding Disorder, Trichtillomania, Excoriation Disorder).

DSM-V continued

Specify:

- Insight (good, fair or poor)
- Absent insight/delusional beliefs
- Tic-related (current or past history)

Screening Questions for OCD

1. Do you wash or clean alot?
2. Do you check things repeatedly?
3. Is there any thought that keeps bothering you that you would like to get rid of but can’t?
4. Do your daily activities take a long time to finish?
5. Are you concerned about orderliness or symmetry?

Y-BOCS Symptom Checklist

(Yale-Brown Obsessive Compulsive Scale)

Comorbid Condition May Mask OCD

Administering the Y-BOCS Symptom Checklist and Y-BOCS Severity Ratings

1. Establish the diagnosis of obsessive compulsive disorder.
2. Using the Y-BOCS Symptom Checklist below, ascertain current and past symptoms.
3. Next, administer the 10-item Y-BOCS Severity Ratings (other form) to assess the severity of the OCD during the last week.
4. Readminister the Y-BOCS Severity Rating Scale to monitor progress.

Patient ______________________ Date ______________

Contamination Obsessions

Current Past

___ ___ Concerns or disgust with bodily waste or secretions
___ ___ Concerned with dirt or germs
___ ___ Excessive concern with environmental contaminants
___ ___ Excessive concern with household items (cleaners)
___ ___ Bothered by sticky substances or residues
___ ___ Concerned will get ill (eg, AIDS)
___ ___ Concerned will get others ill by spreading germs
___ ___ Somatic obsessions
___ ___ Other

Aggressive Obsessions

Current Past

___ ___ Violent or horrific images
___ ___ Fear will act on unwanted impulses (eg, to stab friend)
___ ___ Fear will harm others because not careful enough (eg, hit and run motor vehicle accident, putting poison in food)
___ ___ Fear will be responsible for something else terrible happening (eg, fire, burglary)
___ ___ Other

Sexual Obsessions

Current Past

___ ___ Personally unacceptable sexual thoughts

Religious Obsessions (Scrupulosity)

Current Past

___ ___ Concerned with sacrilege and blasphemy
___ ___ Excess concern with right and wrong, morality

Hoarding/Saving Obsessions

Current Past

___ ___ Collects useless items, eg, old newspapers (distinguish from hobbies; concern with objects of monetary or sentimental value)
___ ___ Concerned with losing or throwing out items by mistake
___ ___ Other

Pathological Doubt

Current Past

___ ___ After completing routine activities, doubts whether performed or not (eg, whether signed check to pay bill)
___ ___ Other

Obsession With Need for Symmetry or Exactness

Current Past

___ ___ Bothered by things not being lined up or being in order
___ ___ Other

Other Obsessions

Current Past

___ ___ Superstitious fear (eg, lucky or unlucky numbers or colors)
___ ___ Other

Cleaning/Washing Compulsions

Current Past

____ ____ Excessive or ritualized hand washing
____ ____ Excessive or ritualized showering, bathing, tooth brushing, grooming
____ ____ Cleaning of household items or other inanimate objects
____ ____ Other measures to prevent or remove contact with contaminants
____ ____ Other

Checking Compulsions

Current Past

____ ____ Checking locks, stove, appliances, water faucets, emergency brake
____ ____ Checking that did not harm others
____ ____ Checking that did not make mistake (eg. balancing checkbooks over and over)
____ ____ Checking tied to somatic obsessions (eg, checking self for signs of cancer)
____ ____ Other

Repeating Rituals

Current Past

____ ____ Rereading or rewriting
____ ____ Repeats same questions
____ ____ Need to repeat routine activities (eg, in and out door)
____ ____ Other

Hoarding/Collecting Compulsions

Current Past

____ ____ Inspecting household trash and accumulating useless objects

Ordering/Arranging Compulsions

Current Past

____ ____ Lines up clothes, canned goods, shoes in fixed order
____ ____ Need for symmetry (eg, shoelaces must be at same tension, socks at same height)
____ ____ Can't complete activity until *just right*

Other Compulsions

Current Past

____ ____ Mental rituals (eg, silently reciting prayers to neutralize a bad thought)
____ ____ Counting compulsions (eg, count ceiling tiles)
____ ____ Excessive list making
____ ____ Pathological slowness (pervades most routine activities)
____ ____ Need to tell, ask, confess
____ ____ Need to touch, tap, or rub*

Current Past

____ ____ Superstitious behaviors (eg, stepping on sidewalk cracks, bedtime rituals)
____ ____ Asking for reassurance over and over
____ ____ Self-damaging behaviors*
____ ____ Rituals involving blinking or staring*
____ ____ Other

* May or may not be OCD phenomena.

Yale-Brown Obsessive Compulsive Scale (Y-BOCS)

www.brainphysics.com

NAME:________________________________

DATE:________________________________

PHYSICIAN:________________________________

Note: Scores should reflect the composite effect of all the patient's obsessive compulsive symptoms. Rate the average occurrence of each item during the prior week up to and including the time of interview.

Obsession Rating Scale (circle appropriate score)

Item	Range of Severity				
1. Time Spent on Obsessions	0 hr/day	0–1 hr/day	1–3 hr/day	3–8 hr/day	> 8 hr/day
Score:	0	1	2	3	4
2. Interference From Obsessions	None	Mild	Definite but manageable	Substantial impairment	Incapacitating
Score:	0	1	2	3	4
3. Distress From Obsessions	None	Little	Moderate but manageable	Severe	Near constant, disabling
Score:	0	1	2	3	4
4. Resistance to Obsessions	Always resists	Much resistance	Some resistance	Often yields	Completely yields
Score:	0	1	2	3	4
5. Control Over Obsessions	Complete control	Much control	Some control	Little control	No control
Score:	0	1	2	3	4

Obsession subtotal (add items 1-5) ________

Compulsion Rating Scale (circle appropriate score)

Item	Range of Severity				
6. Time Spent on Compulsions	0 hr/day	0–1 hr/day	1–3 hr/day	3–8 hr/day	> 8 hr/day
Score:	0	1	2	3	4
7. Interference From Compulsions	None	Mild	Definite but manageable	Substantial impairment	Incapacitating
Score:	0	1	2	3	4
8. Distress From Compulsions	None	Mild	Moderate but manageable	Severe	Near constant, disabling
Score:	0	1	2	3	4
9. Resistance to Compulsions	Always resists	Much resistance	Some resistance	Often yields	Completely yields
Score:	0	1	2	3	4
10. Control Over Compulsions	Complete control	Much control	Some control	Little control	No control
Score:	0	1	2	3	4

Compulsion subtotal (add items 6–10) ________

Y-BOCS total (add items 1–10) ________

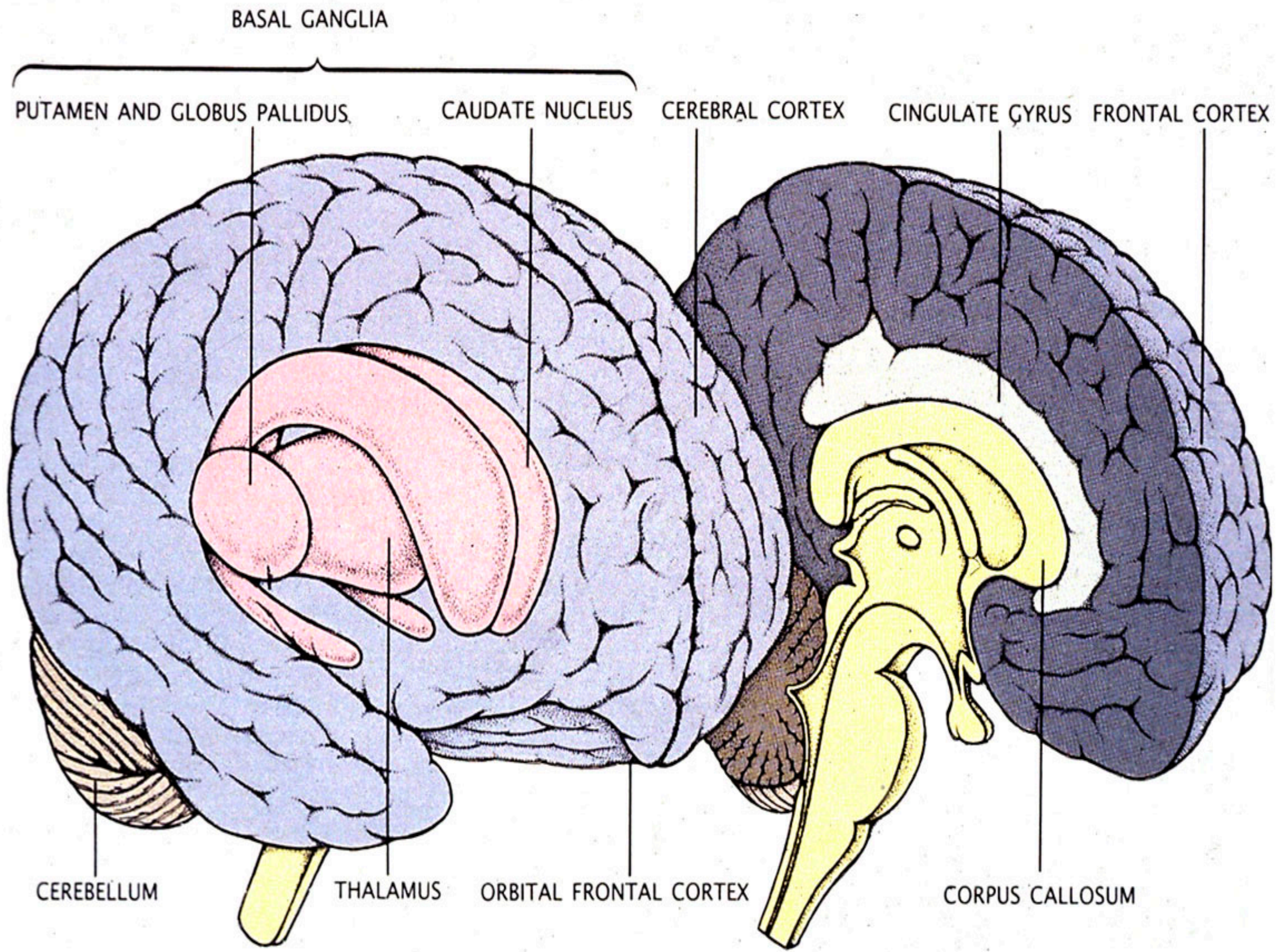
Total Y-BOCS score range of severity for patients who have both obsessions and compulsions:
0–7 Subclinical 8–15 Mild 16–23 Moderate 24–31 Severe 32–40 Extreme

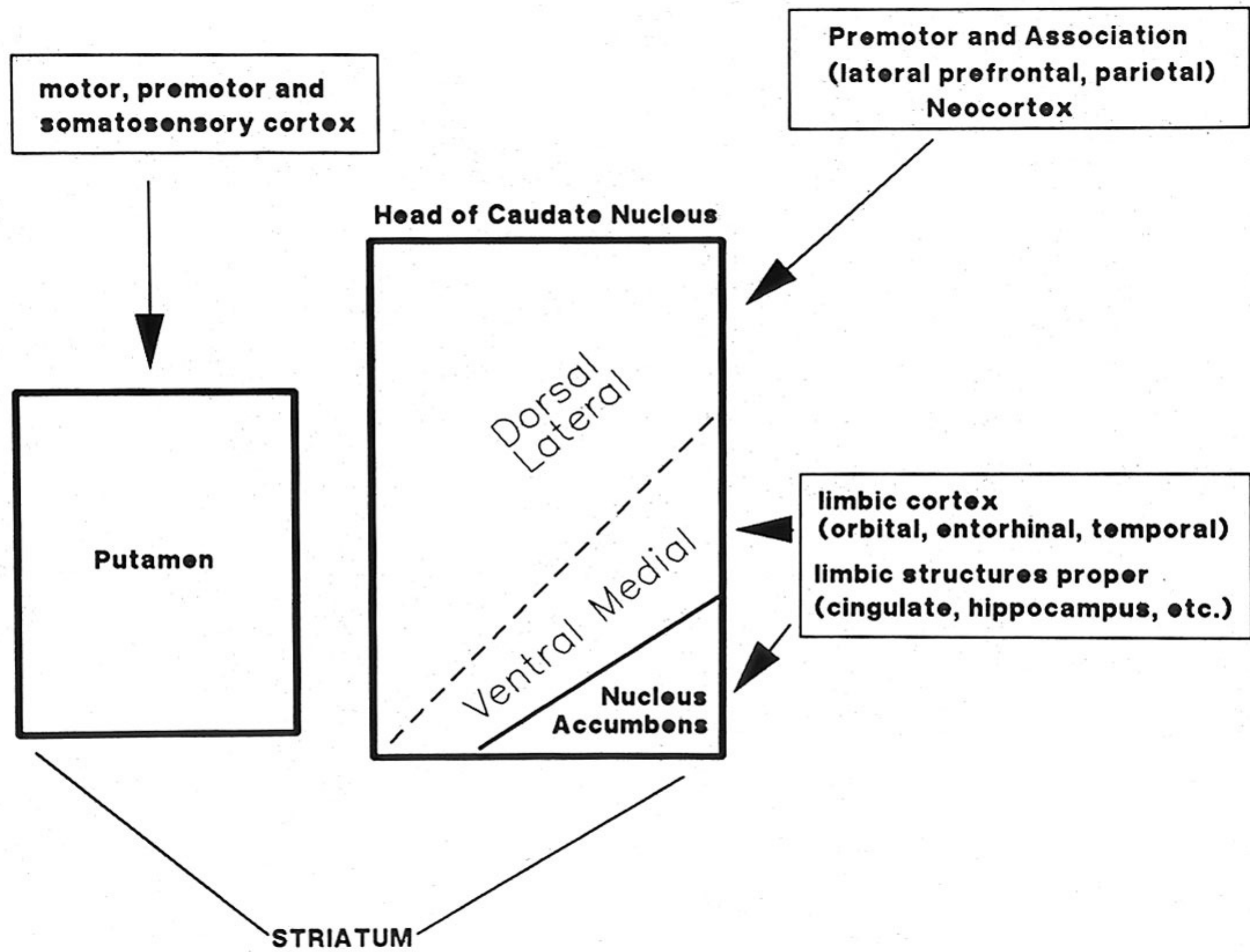
Pathophysiology of OCD

- the serotonin hypothesis is the current explanation for the neurochemical basis for OCD
- supported by the usefulness of serotonergic drugs in treatment and in brain imaging studies
- dopamine and glutamate seem to play important modulating roles

Pathophysiology of OCD

Dysfunction in orbitofronto – CSTC loops (cortico-striatal-thalamic loop circuits of the salience network)


BASAL GANGLIA
PUTAMEN AND GLOBUS PALLIDUS
CAUDATE NUCLEUS
CEREBRAL CORTEX
CINGULATE GYRUS
FRONTAL CORTEX
CEREBELLUM
THALAMUS
ORBITAL FRONTAL CORTEX
CORPUS CALLOSUM


motor, premotor and somatosensory cortex
Premotor and Association
(lateral prefrontal, parietal)
Neocortex
Head of Caudate Nucleus
Dorsal Lateral
Ventral Medial
Nucleus Accumbens
Putamen
limbic cortex
(orbital, entorhinal, temporal)
limbic structures proper
(cingulate, hippocampus, etc.)
STRIATUM

Functionally different regions of the cortex and limbic system have predominant projections to different regions of the striatum. We hypothesize that the symptoms of **chronic multiple motor tics, without other emotional or cognitive systems**, would relate to a dysfunction of the putamen interacting with primary motor cortex. **Pure obsessional disorder without any motor symptoms** would be a disorder of the ventromedial caudate-nucleus accumbens region interacting with limbic cortex and limbic system structures. Dorsolateral caudate-cortex dysfunctions would give more complex cognitive and motor behaviours in addition, as seen in **typical OCD**. Patients with all these behaviours (e.g., **Gilles de la Tourette syndrome with obsessions and compulsions**) would have dysfunction throughout the system.

Reference: Jenike M.A. et al, OCD Theory and Management, 2nd edition.

Treatment of OCD

1. Mild to moderate severity – consider CBT (cognitive behavioral therapy) alone
2. Moderate to severe cases – CBT and pharmacotherapy

Primary Antiobsessive Agents

Drug	Dosage Range	Side-Effects
Fluvoxamine (Luvox)	100-300mg/day	sexual dysfunction
Fluoxetine (Prozac)	20 – 80 mg/day	anxiety, nausea, sexual dysfunction
Sertraline (Zoloft)	50 – 200 mg/day	nausea, sexual dysfunction
Paroxetine (Paxil)	20 – 60 mg/day	anxiety, nausea, sexual dysfunction
Clomipramine (Anafranil)	75 – 250 mg/day	anticholinergic and weight gain
Citalopram (Celexa)	20 – 40 mg/day	nausea
Escitalopram (Cipralex)	10 – 20 mg/day	nausea

Treatment Summary for OCD

1. Prescribe an SSRI and maximize dose as tolerated, wait 8 – 12 weeks
2. If poor response, change to another SSRI and repeat.
3. If 2 to 3 primary drugs ineffective, consider combinations or augmentation
4. Fluvoxamine/clomipramine is a useful combination.
5. Second line agents mirtazapine, venlafaxine, duloxetine
6. Augment with risperidone/olanzapine, paliperidone, aripiprazole, brexpiprazole

Cognitive Behavioral Therapy (CBT)

1. **Exposure and Response Prevention**
   - confront fearful stimuli, become habituated to them, and eventually abandon their rituals
   - make a list of the patient's fears and rituals and arrange them according to difficulty; start with the easiest and assign as patient homework
   - need to educate the patient about normal behavior (ie: how often and when hands should be washed)

(Cont.) Cognitive Behavioral Therapy (CBT)

2. Cognitive Self-Talk Interventions

- ask questions while attempting the exposure (Did I think it was a problem before? Did anyone ever tell me to worry about this?)
- if unable to do above, ask patient to imagine exposure
- important to educate the family. The family must agree not to assist in the patient's rituals.

A NEW HARBINGER SELF-HELP WORKBOOK

Self-Help Seal of Merit
Association for Behavioral and Cognitive Therapies

THE OCD WORKBOOK

THIRD EDITION

Your Guide to Breaking Free from Obsessive-Compulsive Disorder

BRUCE M. HYMAN, PH.D.
CHERRY PEDRICK, RN

The best-selling classic—now revised & updated

Common Reasons For Treatment Failure

1. **Inadequate Diagnosis**
2. **Inadequate Treatment**
   - inappropriate or ineffective medication
   - medication trial too short or dose too low
   - no behavior therapy
3. **Poor Compliance**
   - poor understanding of illness and treatment plan
   - unrecognized cognitive impairment

Alternative Treatments

- Riluzole
- Ketamine
- Lamotrigine
- D-cycloserine

Table 4. Neurostimulation methods and neurosurgery.

Method	Description
External magnetic modulation	
Repetitive transcranial magnetic stimulation (rTMS)	An electromagnetic coil is placed against the forehead and delivers a magnetic pulse that stimulates nerve cells in certain regions of the brain
Deep transcranial magnetic stimulation (dTMS)	dTMS is a special form of rTMS that uses special combinations of coils ('H coils') that are capable of reaching 4 cm beneath the surface of the skull
Theta burst stimulation (TBS)	In contrast to rTMS, the magnetic pulses are applied in a certain pattern, called bursts, which allows using a lower stimulation intensity and a shorter time of stimulation
External electric modulation	
Modified electroconvulsive therapy (mECT)	mECT is still based on the induction of a brief seizure in a controlled setting, while the motor signs of the seizure are absent
Transcranial direct current stimulation (tDCS)	To stimulate brain cells, a constant low electric current is delivered via electrodes on the head without inducing a seizure
Internal electric modulation	
Deep brain stimulation (DBS)	A coiled wire (lead) with four electrodes is placed in certain regions of the brain. The lead is connected with a battery-powered pulse generator which is placed subcutaneously below the clavicle via an insulated wire that runs below the skin
Stereotactic leasioning without opening the skull	
Radiosurgery (e.g. Gamma Knife)	Radiation is used to inactivate defined targets in the brain, without the need for a surgical incision
MRT-guided focussed ultrasound surgery (MRgFUS)	High-power ultrasound waves are applied across the skull to induce a peak temperature in the target region between 51 and 56°C to precisely ablate a target in the brain
Stereotactic surgery with skull-opening	
Ablative neurosurgery with thermocoagulation	Lesions are made by thermocoagulation with a leucotome inserted into a burr hole in the skull. Common methods include cingulotomy, capsulotomy, subcaudate tractotomy, and limbic leucotomy

Reference: Bandelow et al, World Federation of Societies of Biological Psychiatry (WFSBP) guidelines for treatment of anxiety, obsessive-compulsive and posttraumatic stress disorders – Version 3.Part II: OCD and PTSD

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