

Dean's Grand Rounds



Catatonia and ECT: a European perspective

Thursday 14 December 2023, 4.00pm-5.30pm



“CATATONIA AND ECT”

Dr Myles Doyle
Consultant Liaison Psychiatrist

14/12/2023



Our patient

- W
- 72 yo male.

Past Medical History:

- *Nephrectomy – 1979 post rugby injury*
- *HTN*
- *Diverticulosis*

Past Psychiatric History:

- 2018 1st presentation to mental health services via an admission to an acute inpatient mental health unit with low mood and subsequently dx with major depressive episode.
 - *Venlafaxine commenced*
 - *Subsequent switch to hypomania/manic affective state and started on Lithium.*
 - *4 month admission*
- OPD f/u and lithium stopped in 2021
- Represented to the same acute inpatient mental health unit in early September 2022 with low mood and was admitted.

Prior to depressive relapse in Sept '22

- W living independently at home
- Active in the community, retired aged 60 having ran his own insurance firm.
- Local cycling club, local choir, trips to visit his children, dog walking.
- Recently on a cycling holiday with son.
- Continued to care for and visit wife regularly who is a NH resident.
- Very supportive and involved family:
 - *3 children: 2 sons in Ireland and a daughter in London*

Following psychiatric admission in early September 2022:

- Initially made a good recovery in mental state until end of October 2022.
- Between the 28th and 29th October was reported to rapidly deteriorate.
 - *Unusual behaviour*
 - *Concerns about possible elation emerging*
 - *Rapidly became markedly cognitively impaired over the coming days: completely disorientated and confused.*
 - *Now a possible hyperactive/agitated delirium was considered, however W remained systemically well throughout.*

- Transferred to the Emergency Department of the local acute care hospital on both the 2nd and 12th November for investigation of organic cause but on both occasions was discharged back to the acute inpatient mental health unit with no acute medical cause identified

1st presentation: 1/52 increasing confusion

- CT B on 2/11/22 – No acute intracranial pathology
- Bloods unremarkable
 - *DC back to inpatient mental health unit*

2nd presentation:

- Represented on 12/11/22
- Further deterioration in cognitive status, GCS 13/15, ?medical cause for acute deterioration.
- On review: was walking with normal gait, no focal neurology seen.
 - *CT B Nil acute*
 - *CXR NAD*
 - *Bloods unremarkable*
 - *Urine dip NAD*
 - *Again DC back to inpatient mental health unit*

3rd presentation:

- Again transferred to SVUH ED from inpatient mental health unit 22/11/22 with a detailed transfer letter treating Consultant Psychiatrist detailing concern that an organic pathology had been missed.
 - Consistently declining in function and ability: mute, unresponsive, no longer weight bearing, doubly incontinent, repetitive abnormal movements.
 - Concerned re serious medical illness, with reference to ?cerebral infection, vasculitis, ?prion disease.
- On arrival:
 - **GCS 10/15, agitated**
 - *Apyrexial*
 - *Otherwise no autonomic instability noted*
 - *Increased tone in all limbs*
 - *ECG show pre-mature atrial complexes*



Investigations begin, Specialist referrals are made, differentials are considered and treatments initiated:

- Bloods: CK 573, Sodium 147, CRP 11.7 otherwise unremarkable
- 3rd CT Brain
 - *New asymmetry overlying the left cerebral hemisphere which appears isodense, suggestive of **left-sided subdural haematoma**. No acute intracerebral haemorrhage identified.*
- Neurology consult requested.
 - *Impression: “possible seizures” (based on descriptions to Neurology of “?? seizure like episodes” by family) or “possible intracranial infection or inflammation”*
- Commenced on empiric antiviral encephalitis cover and antibiotics as per microbiology.
- Commenced antiepileptic therapy; levetiracetam and sodium valproate
- Discussion with neurosurgery regarding subdural haematoma.

- Over the following days multiple investigations were carried out including:
- First EEG was completed and reported by neurophysiology on 23/11/22 – some potentially abnormal complexes. Nil else to remarkable.
 - *“bilateral cerebral dysfunction without definite asymmetry, no epileptiform abnormalities. No electrographic features of a specific encephalopathy were identified.”*
- MRI Brain was facilitated with the assistance of anaesthetics on the 28/11/22, and W was subsequently transferred to ICU for ongoing airway protection.
 - *MRI (“Nil acute. Minor old infarcts. Subdural haematoma...No typical stigmata of prion disease, CNS vasculitis, intravascular lymphoma...”)*
 - *Blood cultures*
 - *Lumbar puncture X 2 MC&S and cytology*
 - *Serum autoimmune encephalitis screen*
 - *Vasculitic screen*
 - *Infectious disease panel*
 - *Paraneoplastic screen and CT TAP (non-specific liver lesions identified)*
- W was being regularly reviewed now by both multiple Neurologists and Intensivists in ICU, with other specialist opinions/investigations being sought, seeking the rarities and ***less obvious (perhaps?)...***

Medical impression at this time....

- *"unusual autoimmune encephalopathy?"*
- *"? multifactorial cause, ?hypoactive delirium"*
- *All still medically in the mix with multiple opinions at this stage*
- Results were still pending including autoimmune and paraneoplastic screens
- Empirical trial IVIG 0.4g/kg/day x5/7 commenced 06/12/22
- Trial IV methylprednisolone 500mg OD x5/7
- No noted response after trial IVIG or IV MP.
- Ongoing consideration of AI encephalopathy but no typical findings on MRI or CSF (panel results not yet back)

- Consideration of brain biopsy if all Ix negative (Cerebrospinal fluid real-time quaking-induced conversion (CSF RT-QuIC) negative)
- Recurrent temperature spikes were documented in ICU
- CXR remained clear despite ongoing risk of aspiration.
- Ongoing concern and search for organic cause of symptoms. It was felt that W's presentation was unlikely and not typical for NMS.
- Repeated EEGs (**'background appearance very abnormal, slow and non-specific, not epileptiform or notable for encephalopathy'**) and reports/discussions following repeated MRI at neuroradiology conference.
- Diagnostic dilemma continues....

Referral to Liaison Psychiatry:

- With extensive medical investigations being non-conclusive and trials of empirical treatments not improving W's condition consideration of his presentation being a manifestation of a psychiatric illness was suggested....
- W was first seen by Liaison Psychiatry on 30/11/22 and again on 01/12/22 in the midst of the aforementioned investigations, trials of treatments and diagnostic uncertainties.
- On review W remained largely unchanged clinically. He was non-verbal, GCS was 9/15.
- Eyes were not opening (? resistant to being opened). Low level GCS limited physical neurological examination, and obviously limited assessment of mental state. Demonstrated no awareness to his environment.
- Displayed ongoing repetitive involuntary movements – **rapid pace**, difficult to refine towards descriptions of stereotypic movements intermittent with posturing/waxy flexibility etc
- Brisk reflexes, right sided clonus and right sided up going plantar reflex – considered to be incidental to old minor infarcts previously that had never presented clinically

Catatonia became a formed differential/preferred opinion from Liaison Psychiatry

Ongoing complexity due to clinical uncertainty

- Clinical judgment by Liaison Psychiatry at this juncture was to support a preferred differential of Catatonia.
- Decision to commence Lorazepam Challenge to seek improvement in catatonic state:
 - *Lorazepam titrated up to 2mg IV TDS and subsequently to 2mg QDS with no noted response*
 - *Further titration to 3mg QDS ON 13/12/22*
 - *4mg 4^o from 15/12/22 (total 24mg/day)*
- More protracted Lorazepam challenge allowed time for resolution of SDH prior to consideration of ECT.
- WR was not overly sedate on same and continuous involuntary/psychomotor activity continued.
- Negative response to challenge clear at this point, but does not rule out catatonia/NMS.

Next step: Application for administration of ECT to High Court

- At this point ECT was next line evidence based recommended treatment for W's catatonic state
- Considered a medical emergency and potentially life saving.
- Application made on 19/12/2022.
- As Subdural hematoma is a rare but serious complication following ECT, W's subdural was a consideration prior to commencing ECT.
 - *Not considered contraindication to ECT course*
 - *MRI Brain prior to ECT to rule out extension/ new intracranial pathology*
 - *Decision to perform CT Brain after 3rd session (sooner if clinical concern)*
 - *AEDs stopped*
- Decision supported by family.

ECT Course

- 1st session on 22/12/22 completed in ICU under GA.
 - *No seizure response noted.*
- 2nd session 23/12/22, on review following 2nd session
 - *W demonstrated some effort to visually track/engage*
 - *Increased stereotypic movements, exhibiting posturing, negativism and waxy flexibility*
 - *Son and daughter in law felt W was demonstrating some awareness to their presence with effort to track and verbalise.*
 - *Neurology also noted “possible mild early improvement?”*

- After 3rd session 24/12/22 – was able to tell a member of staff his name when asked, increased efforts to engage with eye contact, tracking to voice.
 - *Increased repetitive/non-purposeful movements*
- 4th treatment 26/12/22: verbalising in response to questions: “ahh.. Ok” in response to being asked “how are you?”.
 - *Ongoing stereotypic movements*
- 5th session 28/12/22: children report increased engagement, recognising children, appropriate brief response, verbally requesting water.
 - *More alert and purposefully engaging*
 - *Ongoing abnormal movements and psychomotor activity*
 - *Discharged from ICU to ward based care.*
 - *1:1 special requested, risk falling from bed, dislodging IVs and NG and ongoing potential delirium.*
- Note lorazepam was continuously weaned throughout ECT course.
- From 29/12/22 W was able to engage with MDT review including SALT, PT, OT and dietetics

- Continued improvements in engagement and verbal communication seen.
- Small volumes PO intake from 30/12/22 (with eventual NG removal on the 20/01/23)
- Physiotherapy noted mobilising on ward with assistance x2 on 12/01/23 (after 9th session ECT).
 - *Mobilising independently with RZF*
- A total of 12 sessions of ECT were administered with the final session on 19/01/23
- Remained pleasantly confused on the ward with 'on/off agitation' as per NS, however:
 - *Was now sitting out and engaging well*
 - *Orientated to time and person*
 - *Showed some insight into recent illness "I didn't realise how serious it was"*
 - *Well enough for days out with family on 27th - 29th Jan, 2023*

Discharge planning:

Discharge planning from the acute medical hospital commenced after final ECT session on 19/01/23.

- Clearly, transfer to an acute psychiatric unit...??? (W had been admitted to the medical hospital from a psychiatric unit, life threateningly unwell due to severity of psychiatric illness, need for ongoing care and recovery as an inpatient)
 - ... ongoing review of patient, and ongoing discussions with family...
- Not so clear that an admission to a psychiatric unit preferred outcome... W continues to improve, resolving delirium, regaining insight
 - ... ongoing review of patient, and ongoing discussions with family...**and patient**...
- Recommendation by Liaison Psychiatry moving towards a respite/convalescence admission to local nursing home, with outreach from local POA Community Team
- W continues to improve, resolving delirium, **regained** insight, mood euthymic and nil psychotic
 - ...ongoing review of patient, and ongoing discussions **with patient**...and family...

Discharge Outcome:

- Discharged on 02/02/2023 to his own home, with his daughter and her family having travelled from London to stay with him for two weeks, with outreach from local POA Community Team
- Opportunistic ACE-R completed at time of discharge scored 86/100

Pharmacological management on discharge:

- Could we NOT commence W on a mood stabiliser...??? Could we discharge this man on no psychotropic medication..???
- A wishful thought that was considered by Liaison Psychiatry (and would have been supported by WR and family if recommended by Liaison Psychiatry)....
-BUT, clearly too risky a thought that would not be supported by clinical reasoning given the severity of his illness during his time in hospital
- Commenced on very low dose Sodium Valproate (slow release) 200mg nocte prior to discharge from hospital

How is W now?

- "Back on the pitch, ready for the second half...." (BIG SPORTS FAN!)
- Living independently in his own home
 - *Under the care of his local POA CMHT*
 - *Completed a course of CBT*
 - *Maintained on Sodium Valproate 200mg daily*
- Performed with his local choir on St Patrick's Day (17/03/2023).
- Disappointed to have missed President Biden's visit to his Irish ancestral town 14/04/2023... was busy having visited his daughter and her family in London, and was self navigating his way back via Heathrow Airport
- Back driving since 03/05/2023
- Conversation with W on 24/05/2023 to see how he was doing: we managed to catch him whilst out for a cycle, having been at the gym the day before (...and having mowed his lawns earlier in the week)



Update to Liaison Psychiatry via WhatsApp from W (Achill Island (West of Ireland), 04/06/2023):

“Enjoying a club cycling 🚴♀️ event. Weather & scenery absolutely amazing. Keeping well W.”

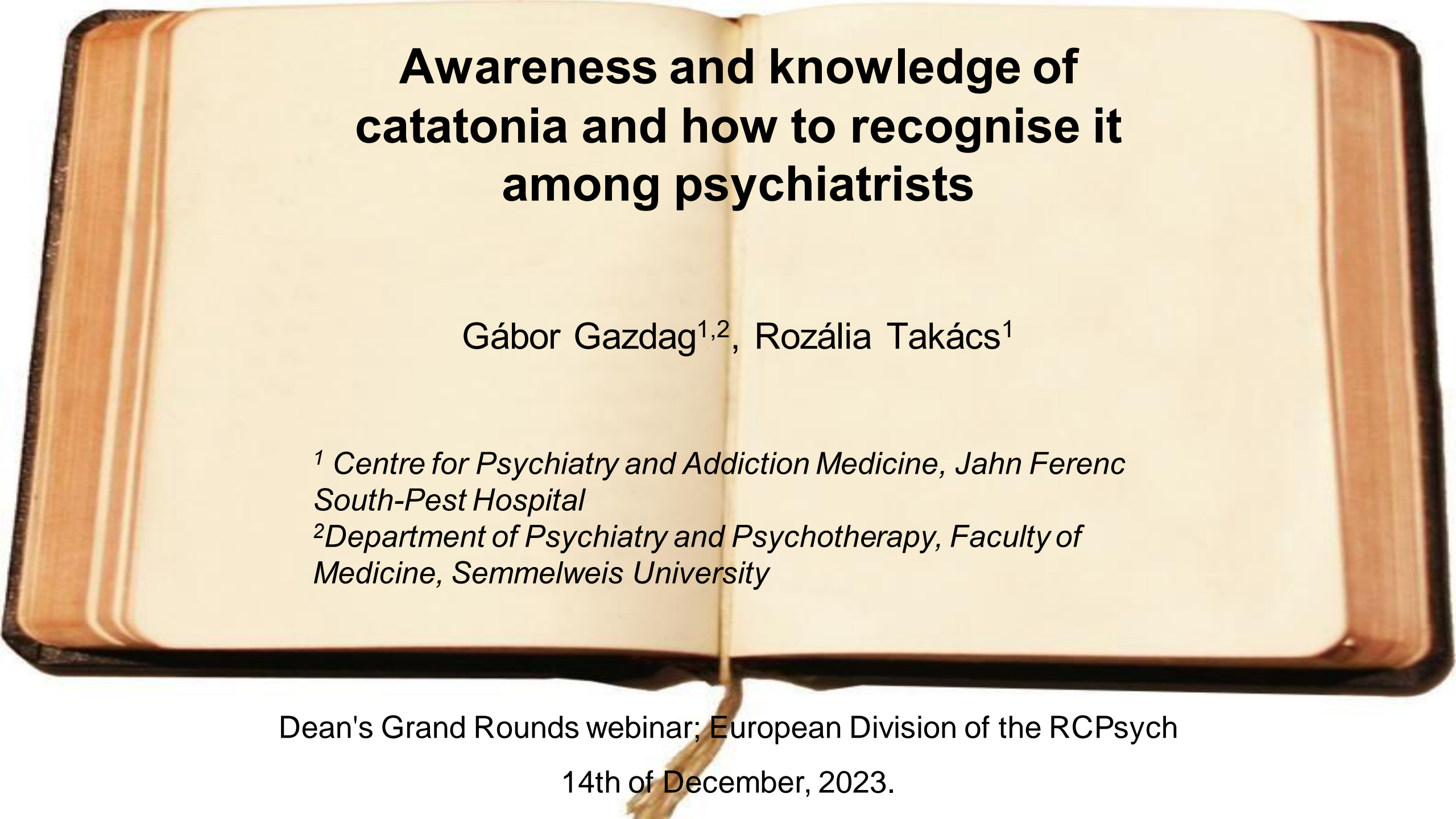
“Would you believe I won 🏆 “ King 🏆 of the Mountains “Trophy. (special prize for my efforts to make it back to cycling 🚴♀️) W.”



Cathedral Performance of
Handel's Messiah with
his choir on
11/11/2023.

A 3D wireframe cube is centered on a grid background. The cube is composed of thin lines and small spheres at the vertices. The text "THANK YOU..." is overlaid in the center of the cube. The background is a light gray grid. There are four thick black L-shaped corner brackets: one in the top-left, one in the bottom-right, and two others on the left and right sides, partially overlapping the grid.

THANK YOU...



Awareness and knowledge of catatonia and how to recognise it among psychiatrists

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Dean's Grand Rounds webinar; European Division of the RCPsych

14th of December, 2023.

Changes in the position of catatonia in DSM5 – new category



Table 2

The catatonia diagnosis in DSM 5.

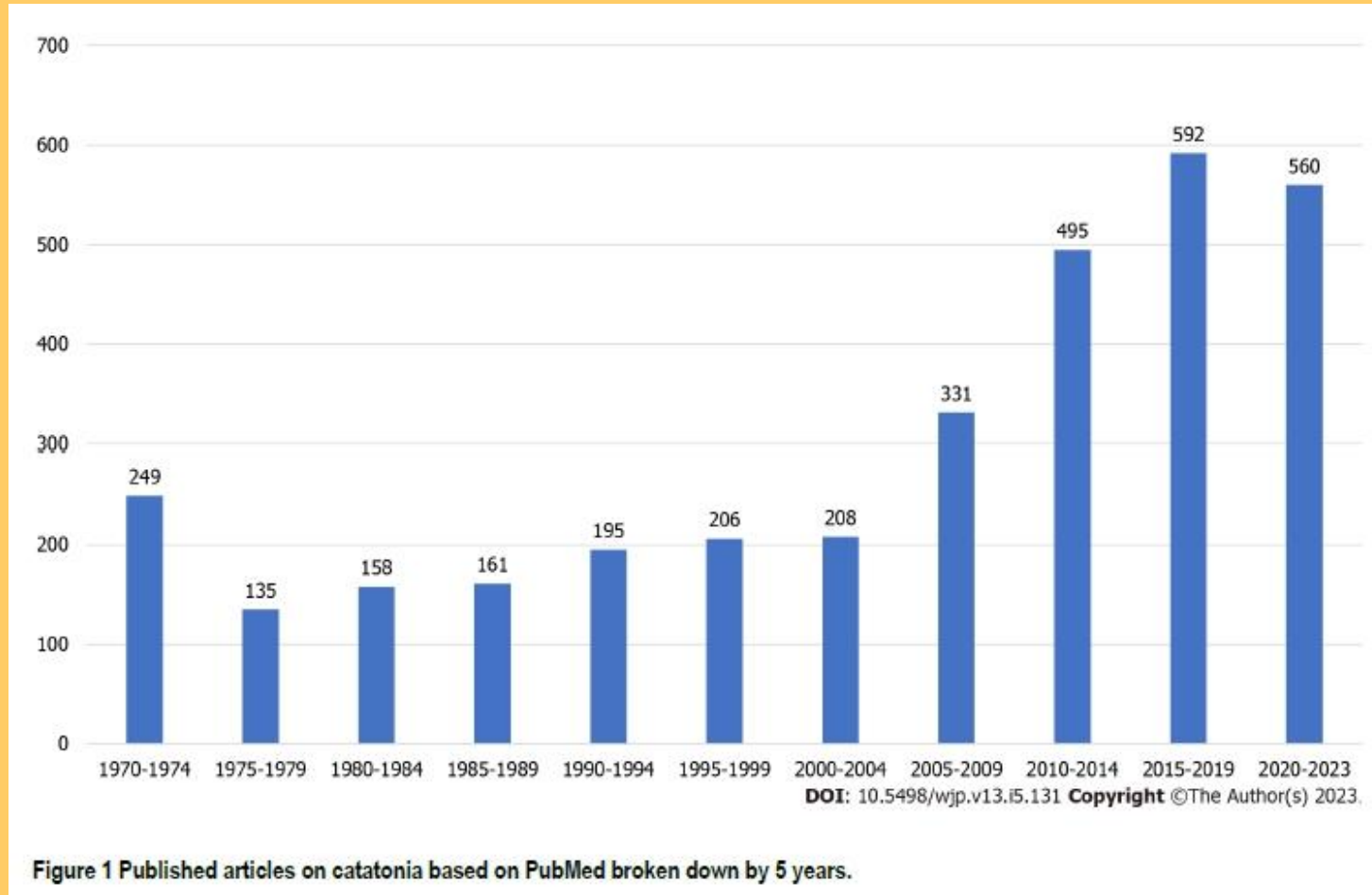
1. Catatonic disorder due to a GMC (293.89)
2. Specifier "with Catatonia" for
 - a. Schizophrenia
 - b. Schizoaffective disorder
 - c. Schizophreniform disorder
 - d. Brief psychotic disorder
 - e. Substance-induced psychotic disorder
3. Specifier "with Catatonia" for current or most recent major depressive episode or manic episode in
 - a. Major depressive disorder,
 - b. Bipolar I disorder, or
 - c. Bipolar II disorder
4. Catatonic disorder NOS

Use of the same set of criteria to diagnose catatonia across DSM-5.

DSM 5 Diagnostic criteria for catatonia syndrome

- A diagnosis may be made when a person exhibits **three or more** of the diagnostic criteria for each type of catatonia.
- ***Catatonia associated with another mental disorder (catatonia specifier)***
 - **1) Stupor** - no conscious mental activity is witnessed within the person's environment.
 - **2) Catalepsy** - the individual maintains a fixed/frozen posture.
 - **3) Waxy flexibility** - slight, even resistance to bodily manipulation.
 - **4) Mutism** - little to no verbal response; cannot be explained by aphasia.
 - **5) Negativism** - opposition or unresponsiveness to external stimuli or instructions.
 - **6) Posturing** - spontaneous and active maintenance of a posture against gravity.
 - **7) Mannerism** - exaggerated or repetitive gestures or expressions.
 - **8) Stereotypy** - repetitive movements without obvious purpose.
 - **9) Agitation** - emotionally restless; not as a result of external stimuli.
 - **10) Grimacing** - displaying contorted facial expressions.
 - **11) Echolalia** - mimics another's speech.
 - **12) Echopraxia** - mimics another's movements.

Increased research interest towards catatonia:



How frequent is catatonia in acute psychiatry?

- consecutively admitted acute patients – in a 4 months period
- 342 acute admissions – 338 included in the survey



Catatonia: **8,55%** (BFCRS)
5,02% (DSM5)

Frequency of catatonia in the literature

EDITORIAL

J ECT;2010(4)

Catatonia in *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*

Andrew Francis, PhD, MD,* Max Fink, MD,* Francisco Appiani, MD,†
 Aksel Bertelsen, MD,‡ Tom G. Bolwig, MD, DMSc,§ Peter Bräunig, MD,||
 Stanley N. Caroff, MD,¶ Brendan T. Carroll, MD,#
 Andrea Eugenio Cavanna, MD,** David Cohen, MD, PhD,††
 Olivier Cottencin, MD, PhD,‡‡ Manuel J. Cuesta, MD,§§ Jessica Daniels, MD,||||
 Dirk Dhossche, MD, PhD,¶¶ Gregory L. Fricchione, MD,###
 Gabor Gazdag, MD, PhD,*** Neera Ghaziuddin, MD,††† David Healy, MD,‡‡‡
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 Stephan C. Mann, MD,¶¶¶ Michael Mazurek, MD,###
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 Georgios Petrides, MD,§§§§ Patricia Rosebush, MScN, MD,###
 Teresa A. Rummans, MD,||||||| Edward Shorter, PhD,¶¶¶¶
 Kazumasa Suzuki, MD,#### Pierre Thomas, MD, PhD,‡‡ Guillaume Vaiva, MD,‡‡
 and Lee Wachtel, MD*****

Journal of ECT • Volume 26, Number 4, December 2010

Editorial

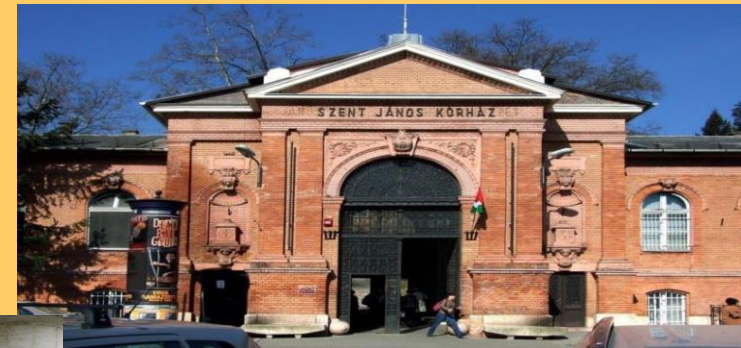
TABLE 1. Prospective Studies of the Incidence of Catatonia

Authors	Year	Patients Screened	Percent With Catatonia Syndrome	Percent With Mutism	Percent With Negativism or Withdrawal
Rosebush et al ¹	1990	140	9	85	78
Ungvari et al ²	1994	212	8	94	67
Bush et al ^{3,4}	1996	215	7	86	75
Peralta et al ⁵	1997	567	3.5	55	60
Northoff et al ⁶	1999	1259	2.7	—	—
Bräunig et al ⁷	2000	297	12	54	58
Lee et al ⁸	2000	160	15	54	71
Peralta and Cuesta ⁹	2001	187	17	84	69
Chalasanani et al ¹⁰	2005	208	12	63	50
Peralta et al ¹¹	2010	200	12	38	54
Mean (SEM)			9.8 (1.4)	68 (6)	62 (3)



AIMS

- Survey the experiences and treatment practices of those psychiatrists and residents who provide acute psychiatric inpatient care in Budapest.

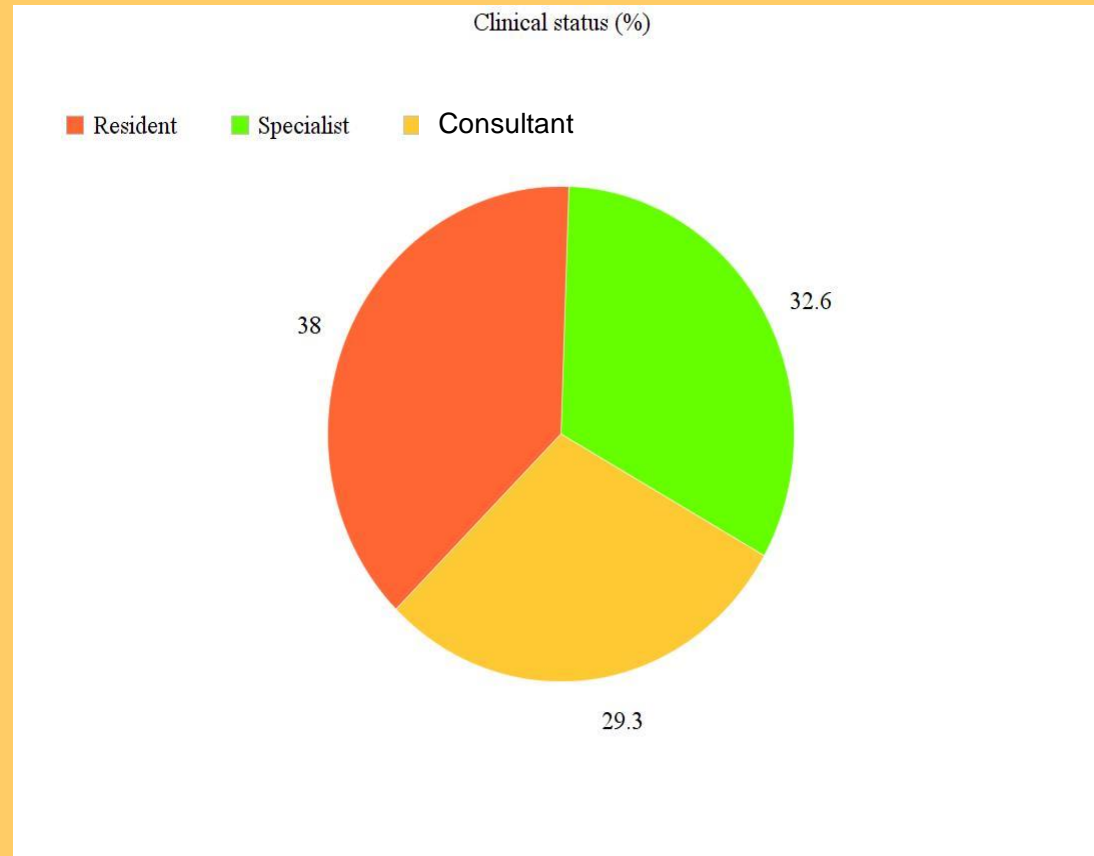


Methods

- We have approached all those psychiatric units in Budapest, that provide acute psychiatric care (n=15)
- We have invited the doctors of the acute psychiatric units to participate in the survey.
- Those who agreed had to answer a 13 items questionnaire regarding experiences and treatment practice of catatonia.
- Sex
- Age
- Clinical position (consultant, registrar, resident)
- Self-rated knowledge of catatonia (5 level)
- Skills in identifying catatonic symptoms (5 level)
- Experience in the treatment of catatonia (5 level)
- Importance of catatonia in his/her clinical work (5 level)
- Evidence based treatment options of catatonia (13 options)
- Symptoms of catatonia (10 options)
- Possible complications of untreated catatonia (10 options)
- How frequently is catatonia associated to
 - Affective disorders
 - Psychotic disorders
 - Organic disorders
- How many catatonic patients has he/she seen in the last 6 months (4 options)
- How many catatonic patients has he/she seen in his/her carrier (4 options)

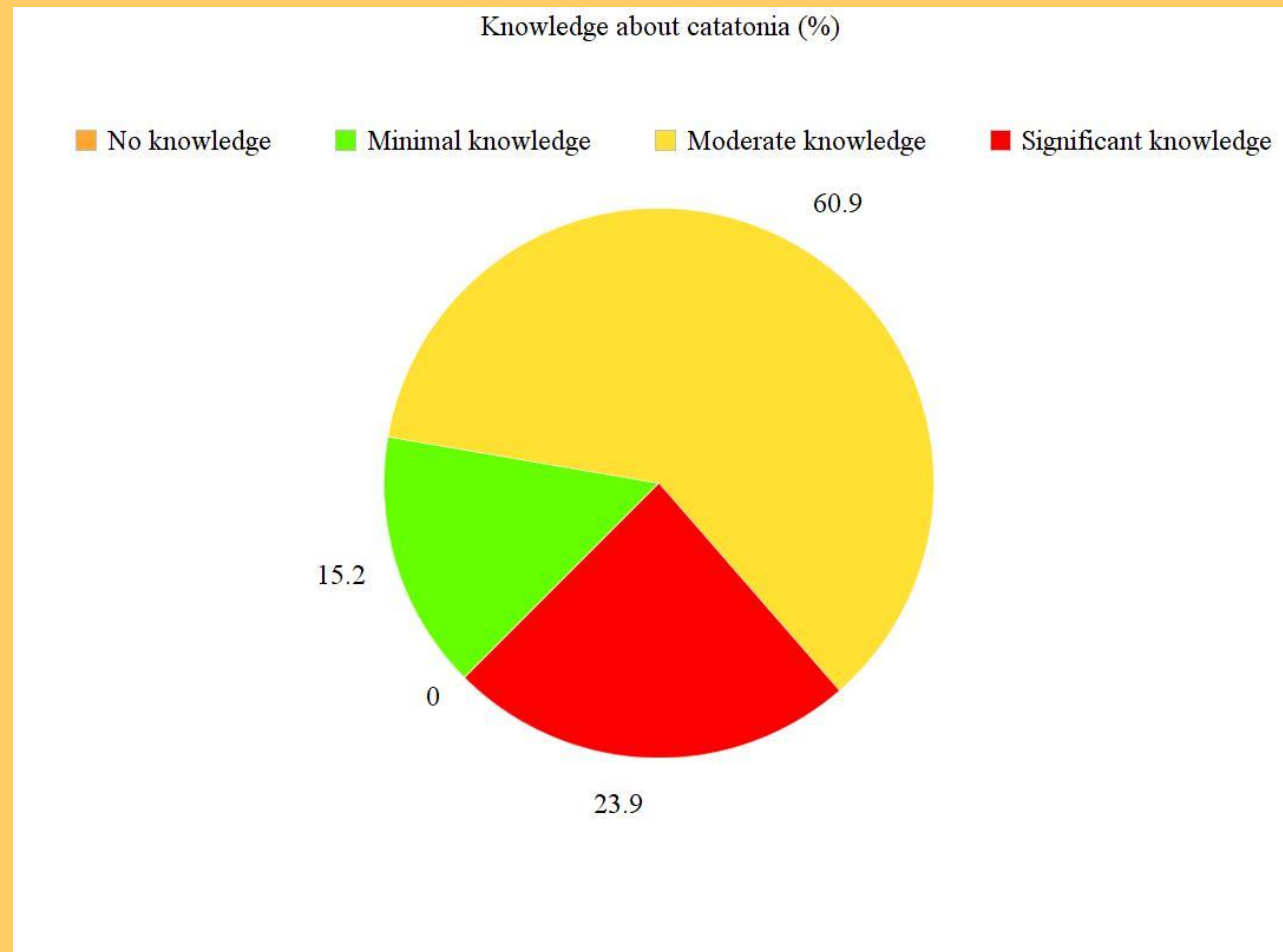
Results 1

- 61 % of the respondents were female
- Mean age: 40,4 +/- 13 years



Results:

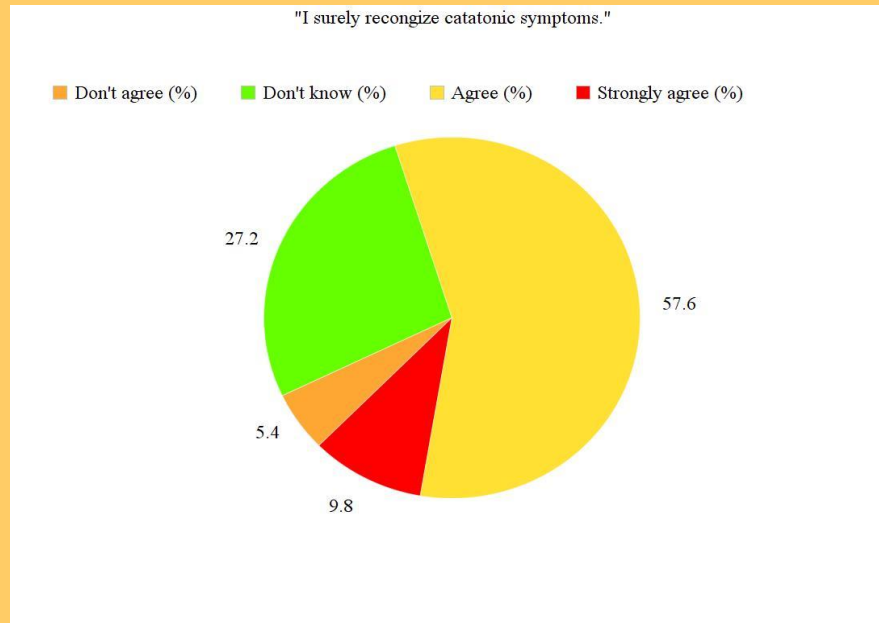
Self-rated knowledge of catatonia



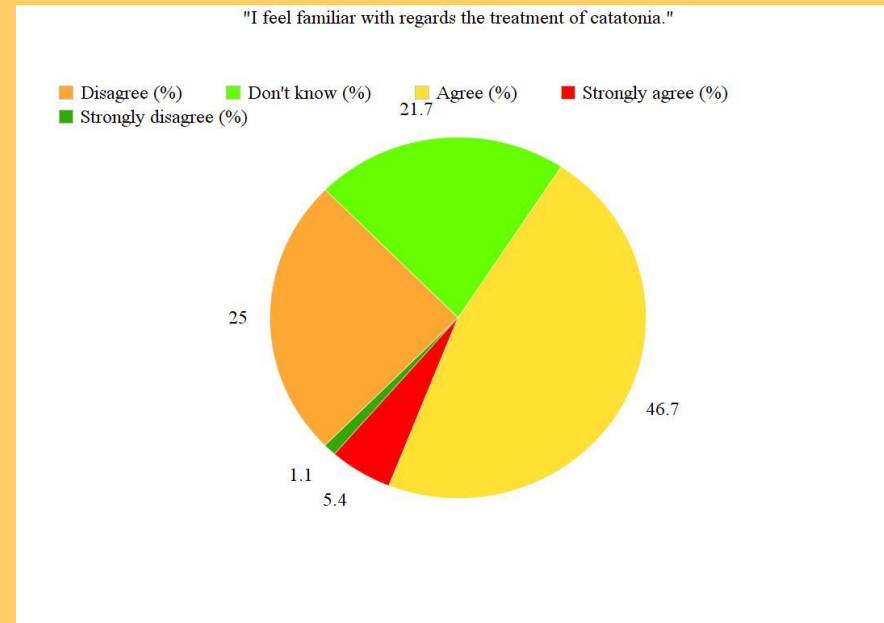
Results:

Self-rated knowledge of catatonia

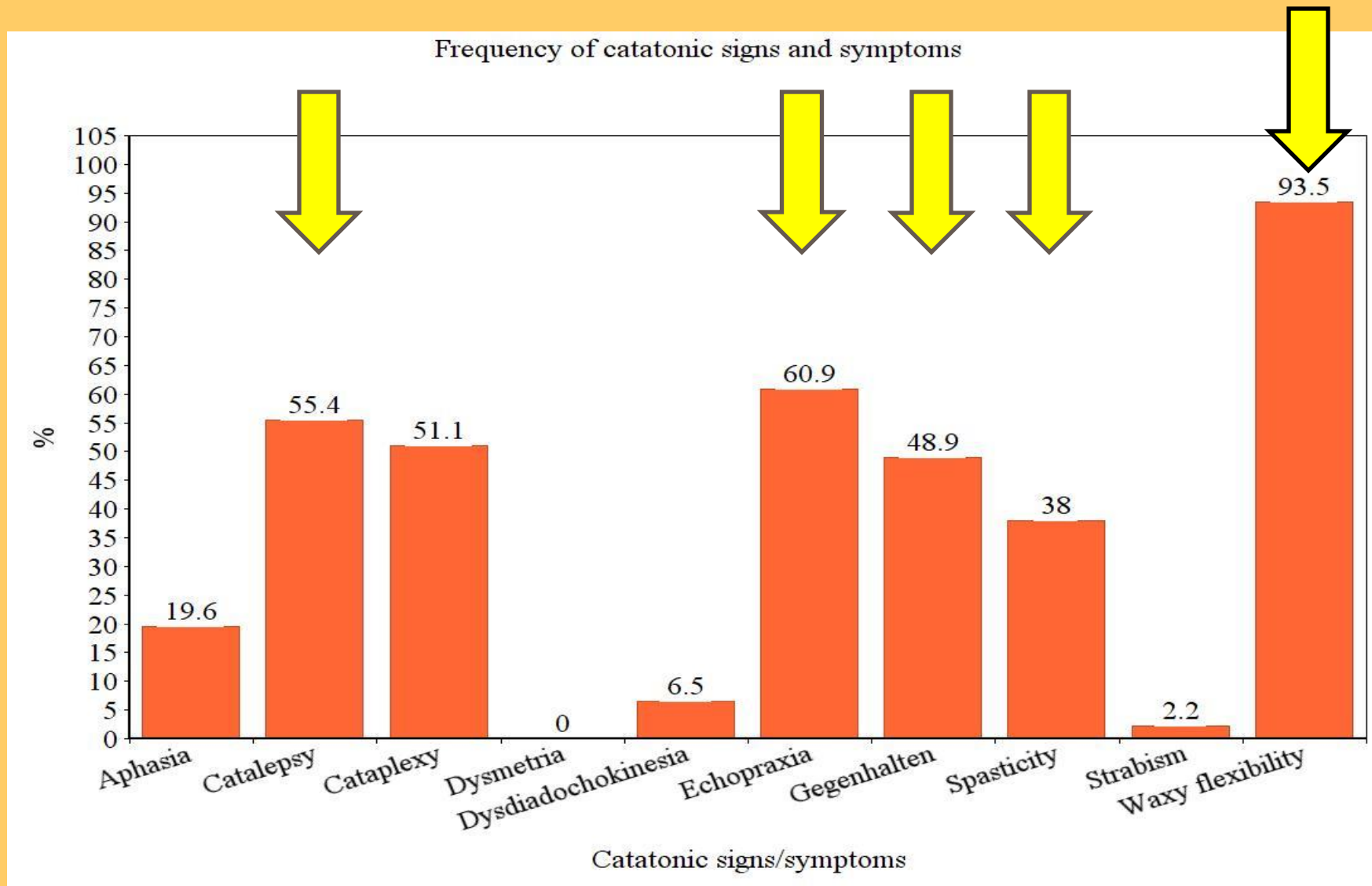
Symptoms



Treatment



Results: identification of catatonic signs



Comparison of theoretical and practical catatonia knowledge

(Wortzel et al.2021; J Clin Psychiatry)

CME Background

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CME Objective

After studying this article, you should be able to:

- Avoid common errors in the identification of catatonia

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Prevalent Gaps in Understanding the Features of Catatonia Among Psychiatrists, Psychiatry Trainees, and Medical Students

Joshua R. Wortzel, MD^{a,*}; Daniel D. Maeng, PhD^a; Andrew Francis, PhD, MD^b; and Mark A. Oldham, MD^a

ABSTRACT

Background: Catatonia is often overlooked, and a key factor for underdiagnosis may be an inadequate understanding of catatonia's heterogeneous phenotypes. The aim of this study was to identify the current state of theoretical and applied knowledge of catatonic features among psychiatry trainees and practitioners using the Bush-Francis Catatonia Rating Scale (BFCRS), the most commonly used instrument to identify and score catatonia.

Methods: We created an online 50-item multiple-choice test and 3-minute standardized patient video to be scored using the BFCRS. Email invitations were sent to medical students and psychiatry residents and fellows through listservs of psychiatry clerkship and residency directors and to consultation-liaison psychiatrists through the Academy of Consultation-Liaison Psychiatry. Participants could access the exam from October 1 to December 31, 2020.

Table 3. Percentage of Questions Answered Correctly on the Multiple Choice and Standardized Patient Portions of the Test Stratified by Bush-Francis Catatonia Rating Scale (BFCRS) Item^a

BFCRS items	Multiple choice, % correct ^{b,c}	Standardized patient, % correct ^c
Bush-Francis Catatonia Screening Instrument (BFCSI)		
1. Excitement	57.9	69.1
2. Immobility/Stupor	28.7	... ^d
3. Mutism	72.2	85.1
4. Staring	74.7	51.9
5. Posturing/Catalepsy	30.6	83.4
6. Grimacing	53.4	73.0
7. Echopraxia/Echolalia	92.3	39.0
8. Stereotypy	60.2	83.8
9. Mannerisms	59.4	36.3
10. Verbigeration	44.6	62.9
11. Rigidity	61.4	18.7
12. Negativism	37.3	91.7
13. Waxy Flexibility	42.1	52.5
14. Withdrawal	38.0	89.2
Average, BFCSI	53.8	64.4
BFCRS, remaining full-scale items		
15. Impulsivity	86.9	82.4
16. Automatic Obedience	62.4	72.2
17. Mitgehen	64.3	77.8
18. Gegenhalten	55.5	57.7
19. Ambitendency	66.2	48.1
20. Grasp Reflex	... ^e	85.9
21. Perseveration	64.8	39.4
22. Combativeness	42.7	87.8
23. Autonomic Abnormality	83.4	95.4
Average, remaining items	65.8	71.9

^aData from test Forms A and B are combined.

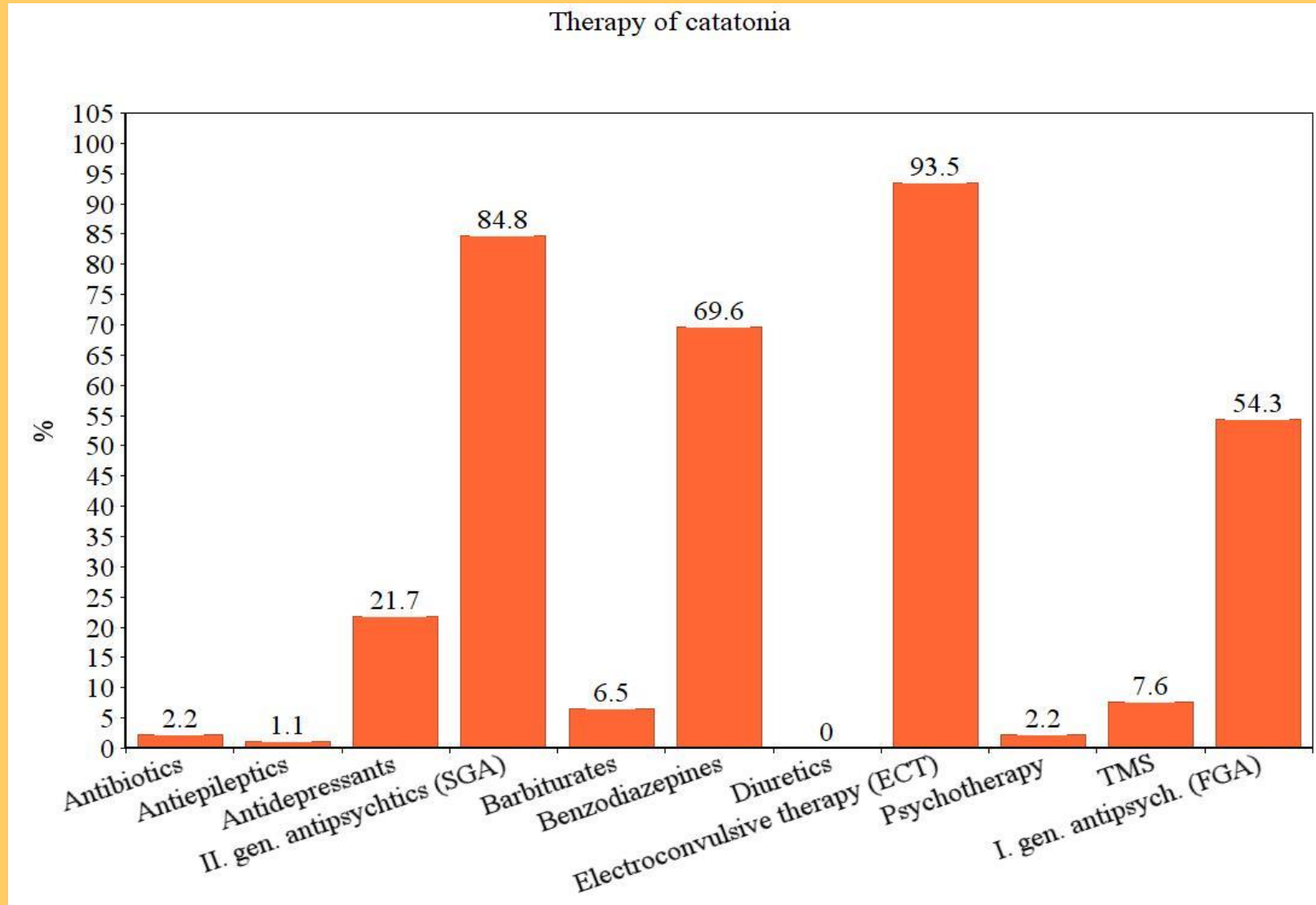
^bQuestions on the multiple-choice portion of the test pertaining to each feature on the BFCRS were aggregated.

^c**Bold** values were misidentified by more than 50% of participants.

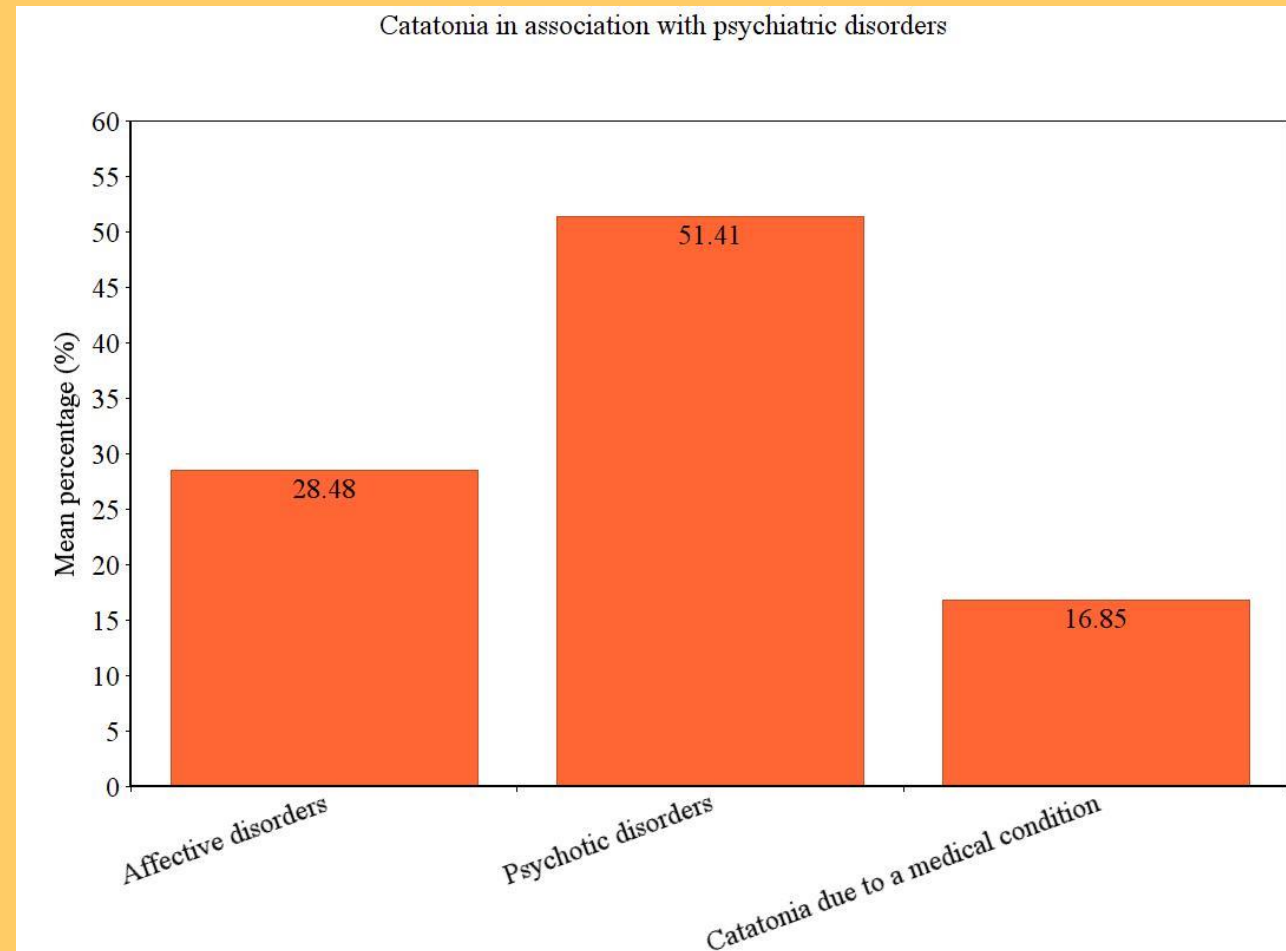
^dAll participants were marked correct for this item (see Methods).

^eFor the multiple-choice test, no question on grasp reflex was included.

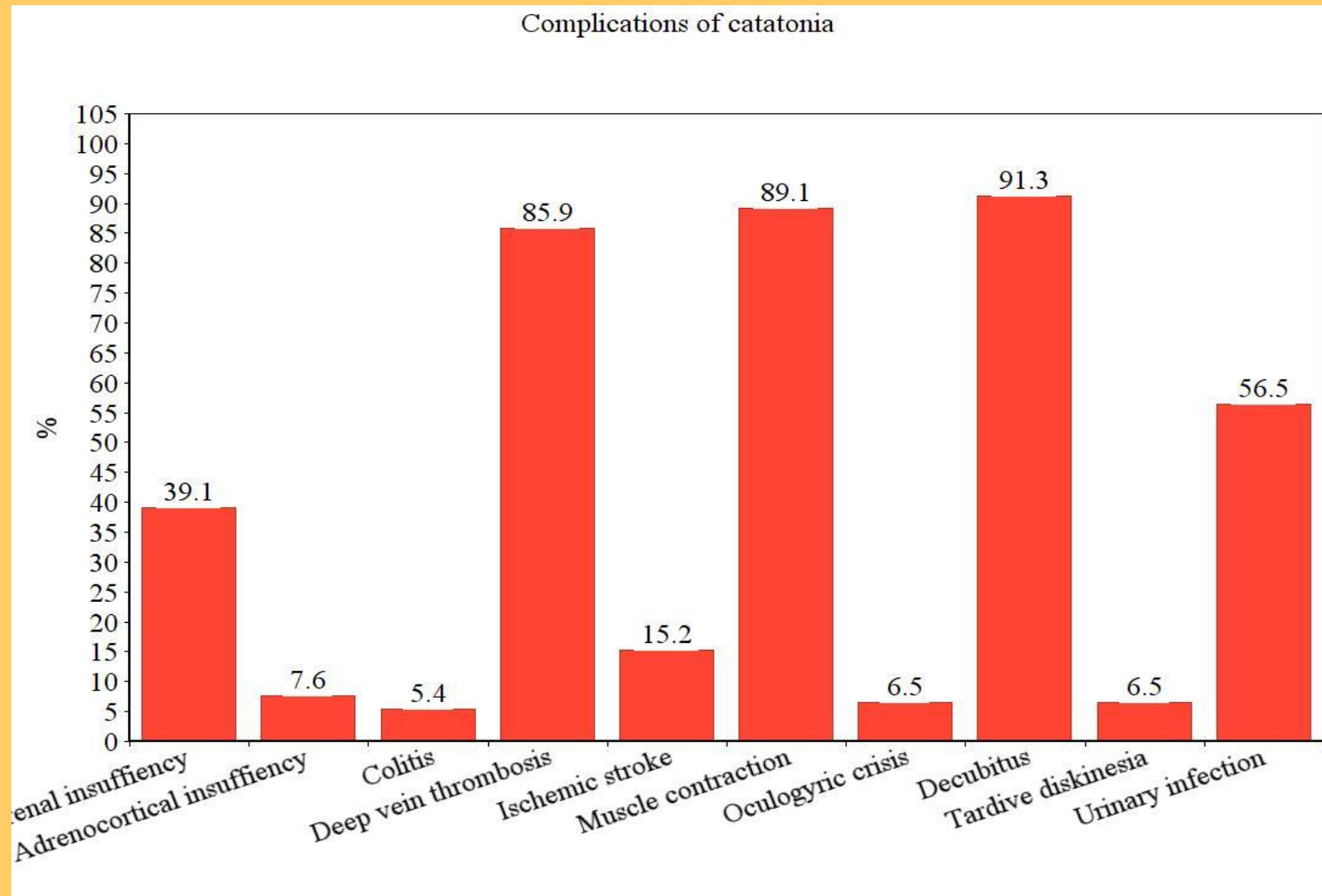
Results: treatment of catatonia



Results: underlying conditions

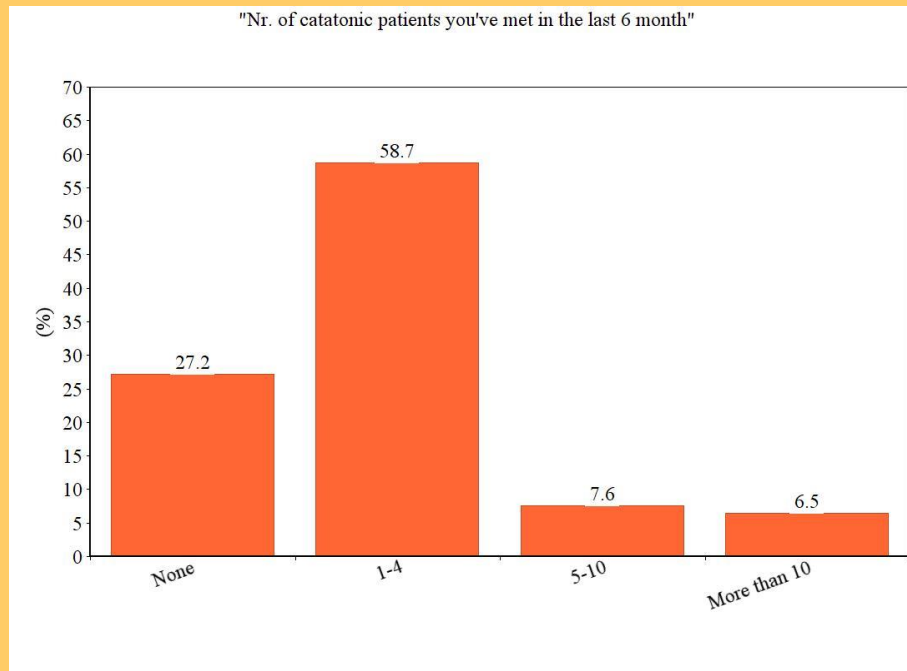


Results: complications of untreated catatonia

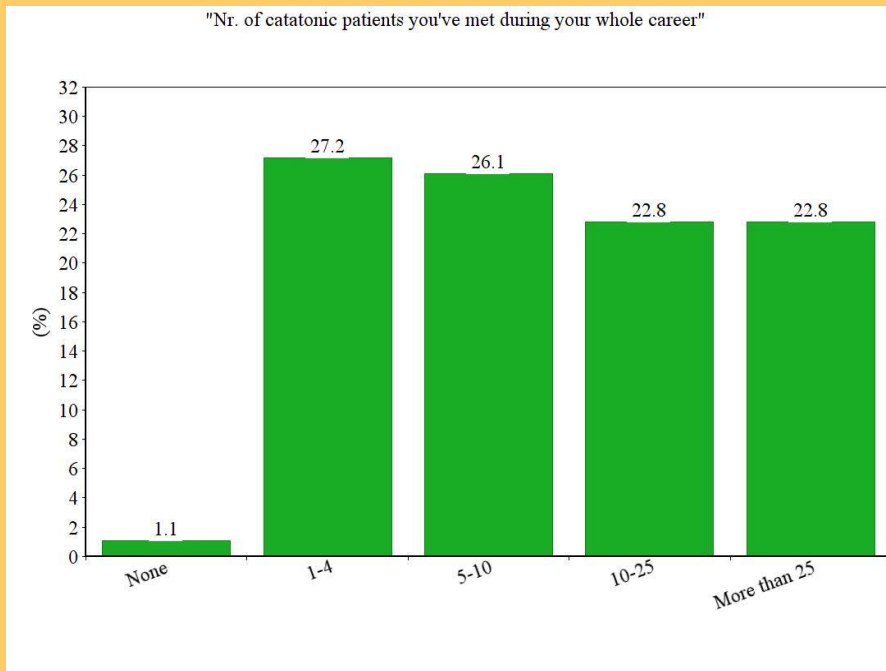


Results: how many catatonic patients have you seen?

Last 6 months



During the whole career



In a 4 months period in 2015, systematic survey with BFCRS in acute psychiatric inpatients (n=338). BFCRS: 8.5%; DSM5: 5%.

Results: statistical analysis

- Clinical position correlated with self-rated knowledge
- There was no difference according to age, sex, clinical position or self-rated knowledge in the estimation of the frequency of the underlying disorder.
- Those respondents' answers who self-rated high knowledge of catatonia significantly differed from the other respondents' answers. All of them indicated ECT as treatment of catatonia but 82% indicated FGA too.

Conclusions

- Majority of the responses reflected the crepelinian concept of catatonia, that catatonia is primarily associated to schizophrenia.
- Respondents would frequently use first and second generation antipsychotics in the treatment, while only 66% of the respondents indicated benzodiazepines as a treatment option for catatonia.
- About half of the respondents failed to identify some of the catatonic signs and underestimated the frequency of catatonia. This may led to an underrecognition of the syndrome and underutilisation of ECT.

Conclusions

- Taking the clinical importance of catatonia into consideration, this topic deserves more attention in the education of the medical students and psychiatry residents.



Thank you for your attention!



ECT for catatonia: national UK / RoI data on usage and outcomes

Rich Braithwaite

Consultant Psychiatrist

Sussex Partnership NHS Foundation Trust

Worthing, UK



Worthing

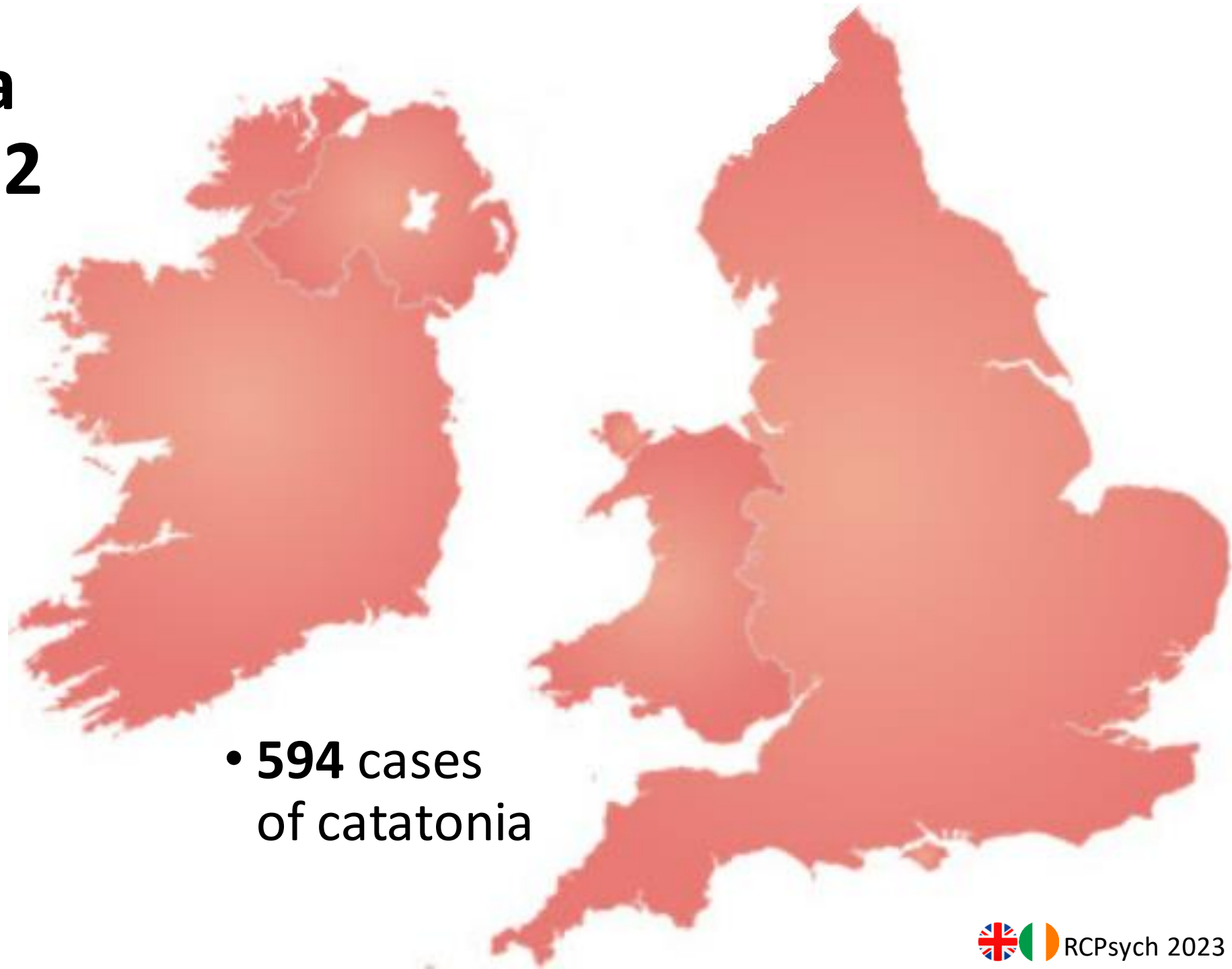
Dr Richard Braithwaite - interests

- Lead Consultant for Neuromodulation
 - Sussex Partnership NHS Trust, UK
- Chair, Committee on ECT & Related Treatments
 - Royal College of Psychiatrists, UK
- Member, Advisory Group
 - ECT Accreditation Service (ECTAS), CCQI, UK
- Co-opted member, RCPsych Council
- No other conflicts of interest

ECTAS data 2021 & 2022

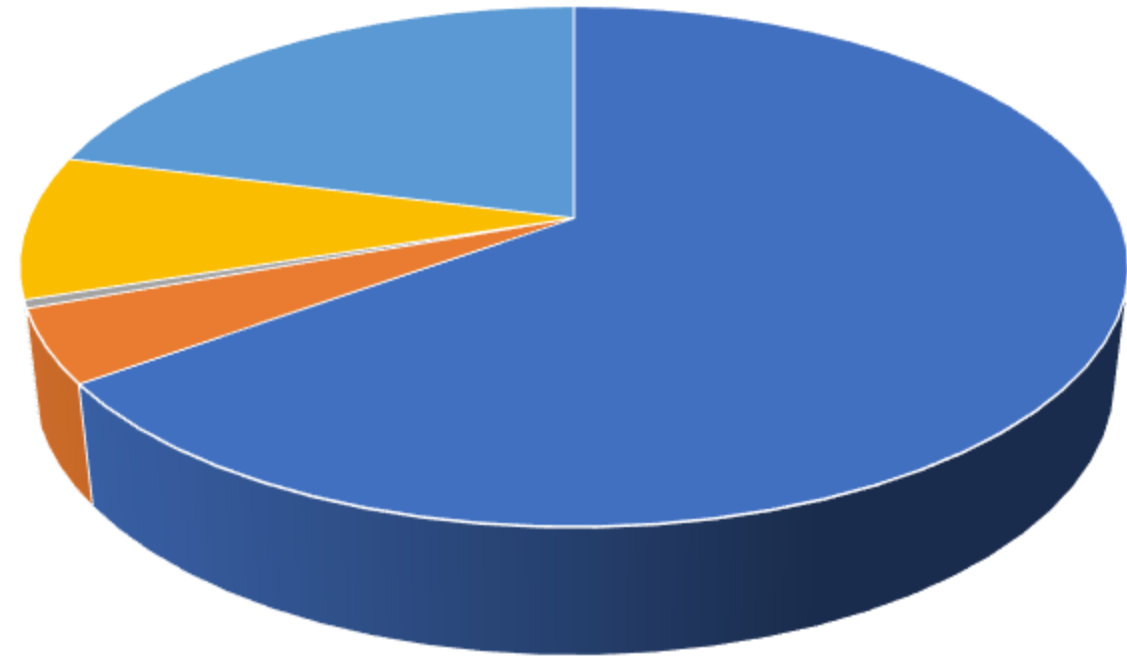
- **3,969** acute courses of ECT
- **3,693** individual patients
- mean age **62.3 years**
- age range **16 – 94 years**

- **594** cases of catatonia



Underlying disease in catatonia (2021 & 2022)

Cause	n
Depressive episode	386
Mixed affective episode	27
Manic episode	3
Schizophrenia	53
Other / unknown cause	125
TOTAL	594



- depressive episode
- mixed affective episode
- manic episode
- schizophrenia
- other / unknown

Depression rating scale outcomes (2021 & 2022)

Syndrome	Cases analysed for remission, n	Cases analysed for response, n	Remission, n	Response, n	Remission, %	Response, %
No catatonia	1510	1693	654	1020	43.3%	60.2%
Catatonia	156	158	62	107	39.7%	67.7%
All patients	1666	1851	716	1127	43.0%	60.9%

Data only from patients with a diagnosis of depressive episode and complete MADRS or HAM-D scores.

BFCRS usage was very low.

CGI-I outcomes and diagnosis (2021 & 2022)

Diagnostic indication	n	% of patients rated 'much improved' or better on CGI-I after ECT
Depressive episode	3419	67.2
Mixed affective episode	168	64.9
Manic episode	73	76.7
Schizophrenia	181	50.9
Catatonia of other/unknown cause	74	66.2
Other	36	63.9

Thanks to:

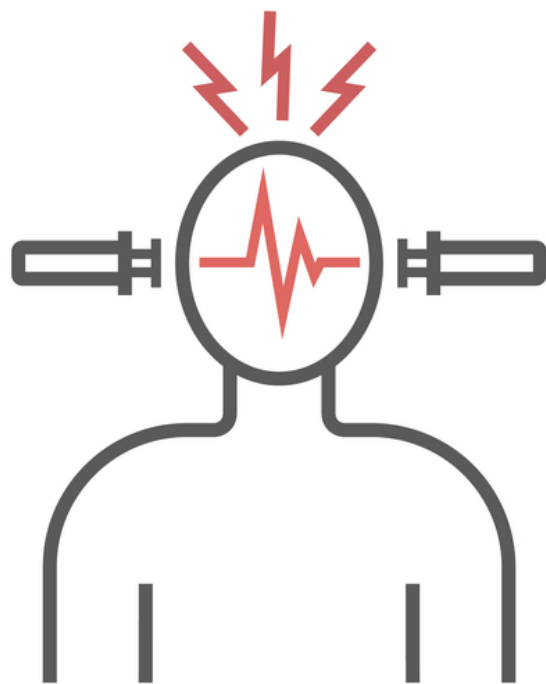
- Prof George Kirov, Cardiff University
- Cassie Regan, RCPsych
- All British & Irish clinic staff who submitted data



ECT – its role in treatment of catatonia and other mental disorders

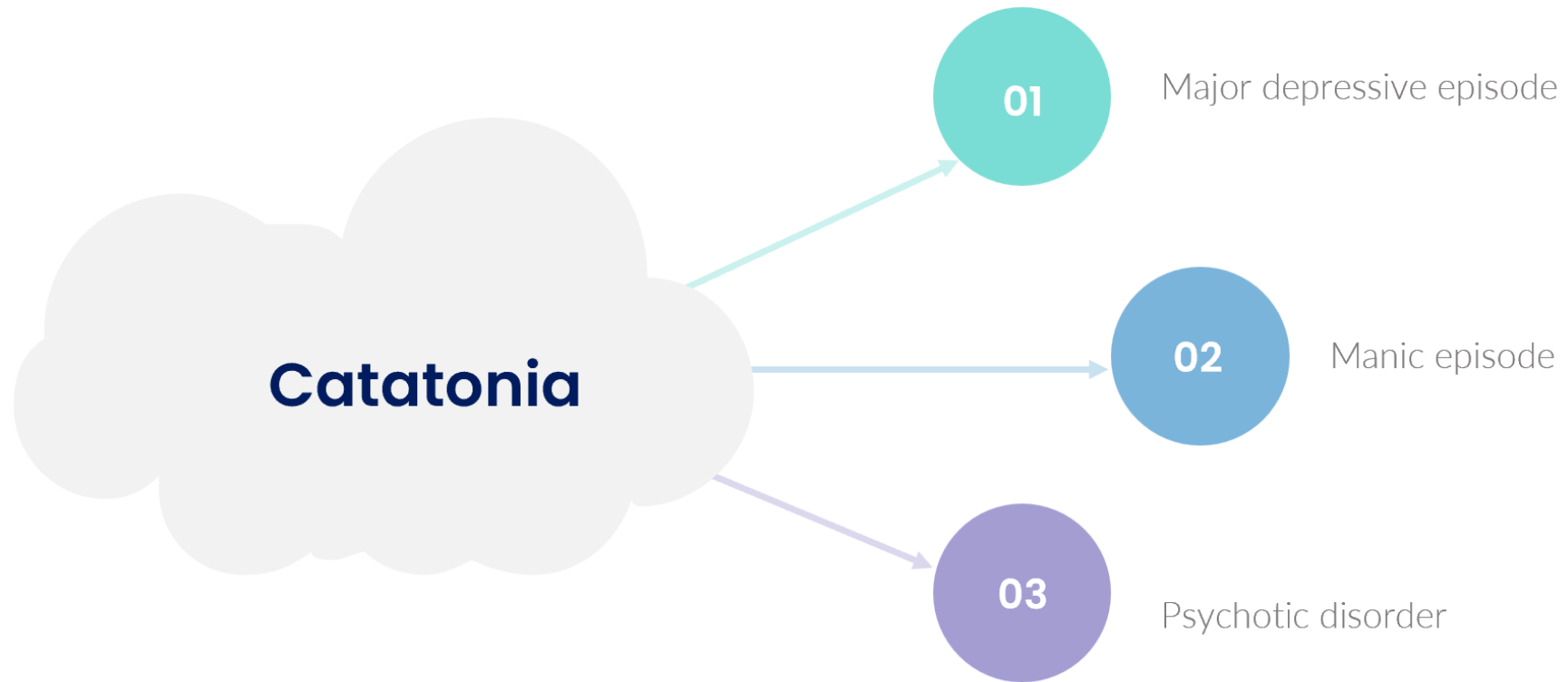
Prof. Dr. Linda van Diermen

RCPsych – December 14th 2023



ELECTROCONVULSIVE THERAPY

When to use ECT



Prediction of electroconvulsive therapy response and remission in major depression: meta-analysis

Linda van Diermen, Seline van den Aamele, Astrid M. Kamperman, Bernard C.G. Sabbe, Tom Vermeulen, Didier Schrijvers and Tom K. Birkenhäger

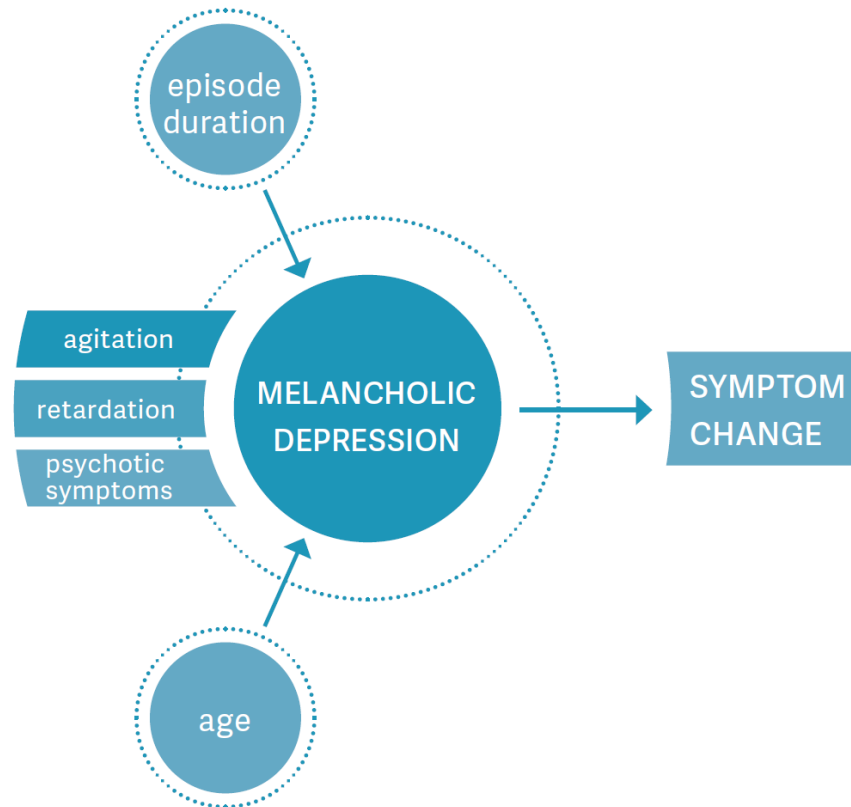


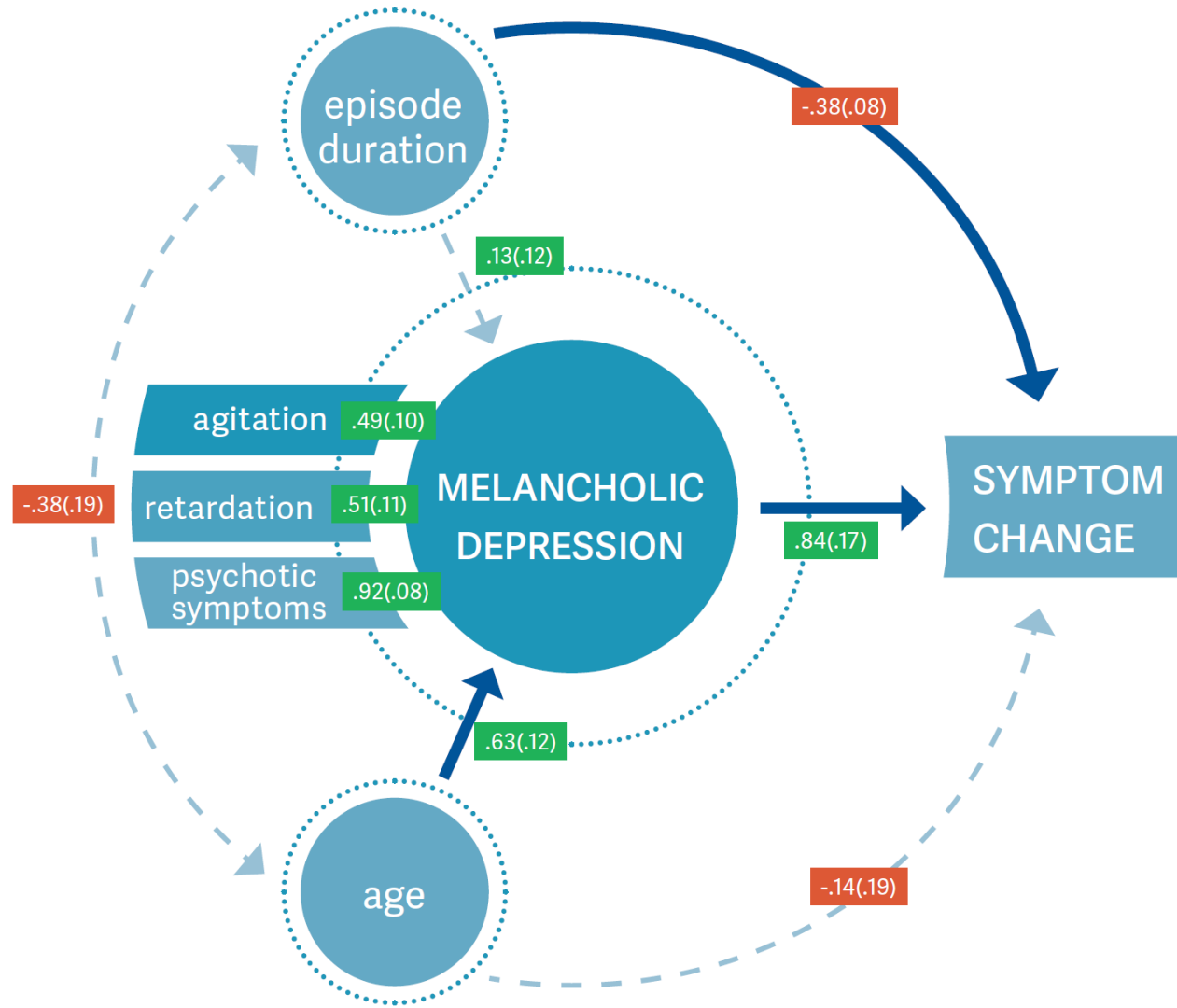
Haq AU, Sitzmann AF, Goldman ML, Maixner DF, Mickey BJ. Response of depression to electroconvulsive therapy: a meta-analysis of clinical predictors. *J Clin Psychiatry*. 2015 Oct;76(10):1374-84. PMID: 26528644.

Conc

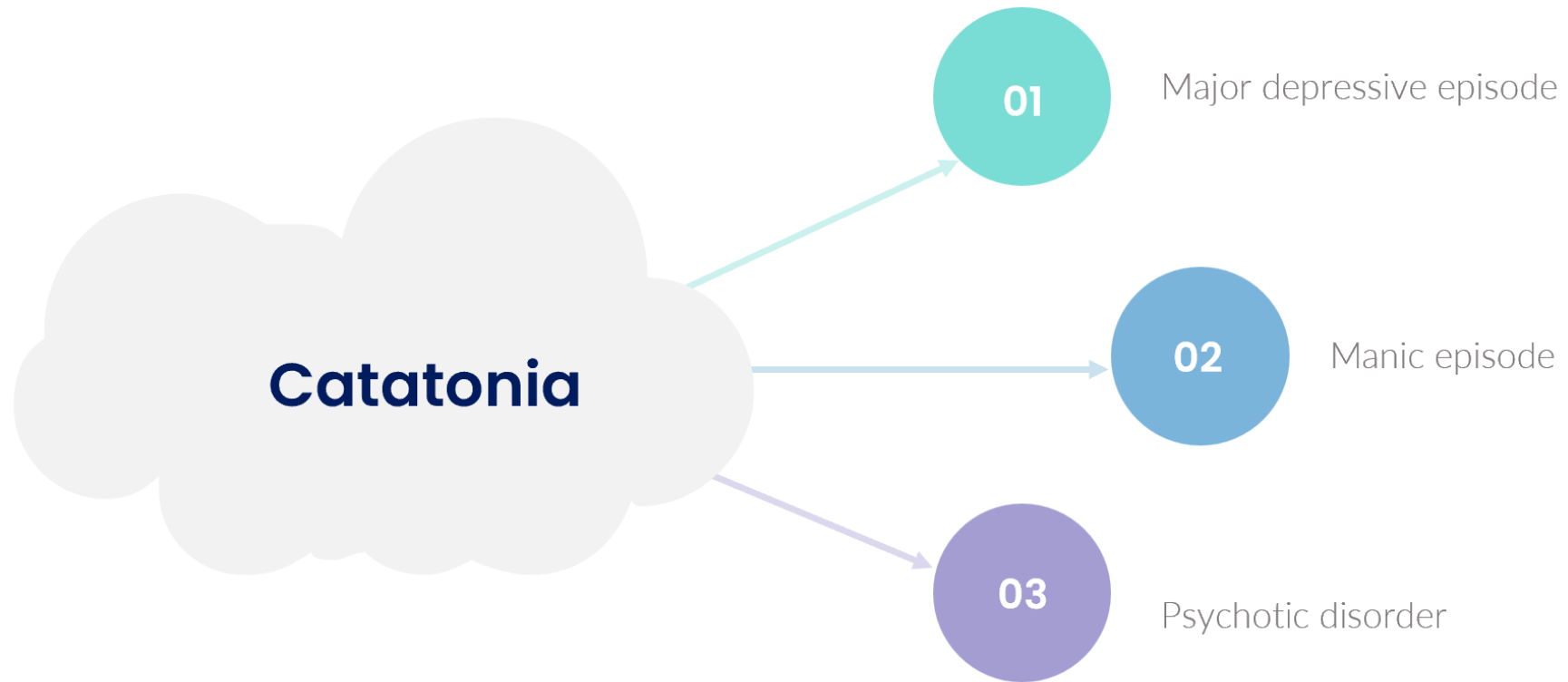
Toward Targeted ECT: The Interdependence of Predictors of Treatment Response in Depression Further Explained

Linda van Diermen, MD, PhD^{a,b,c,*}; Ervin Poljac, PhD^{a,b}; Roos Van der Mast, MD, PhD^d;
Kristiaan Plasmans, MD^c; Seline Van den Aamele, MD, PhD^{a,b,e}; Willemijn Heijnen, MD^f;
Tom Birkenhäger, MD, PhD^f; Didier Schrijvers, MD, PhD^{a,b}; and Astrid Kamperman, PhD^g





When to use ECT



When Electroconvulsive Therapy in Mania: A Review of 80 Years of Clinical Experience

Alby Elias, M.D., F.R.A.N.Z.C.P., Naveen Thomas, M.D., F.R.A.N.Z.C.P., Harold A. Sackeim, Ph.D.

High remission rates (>70%)

Rapid improvement

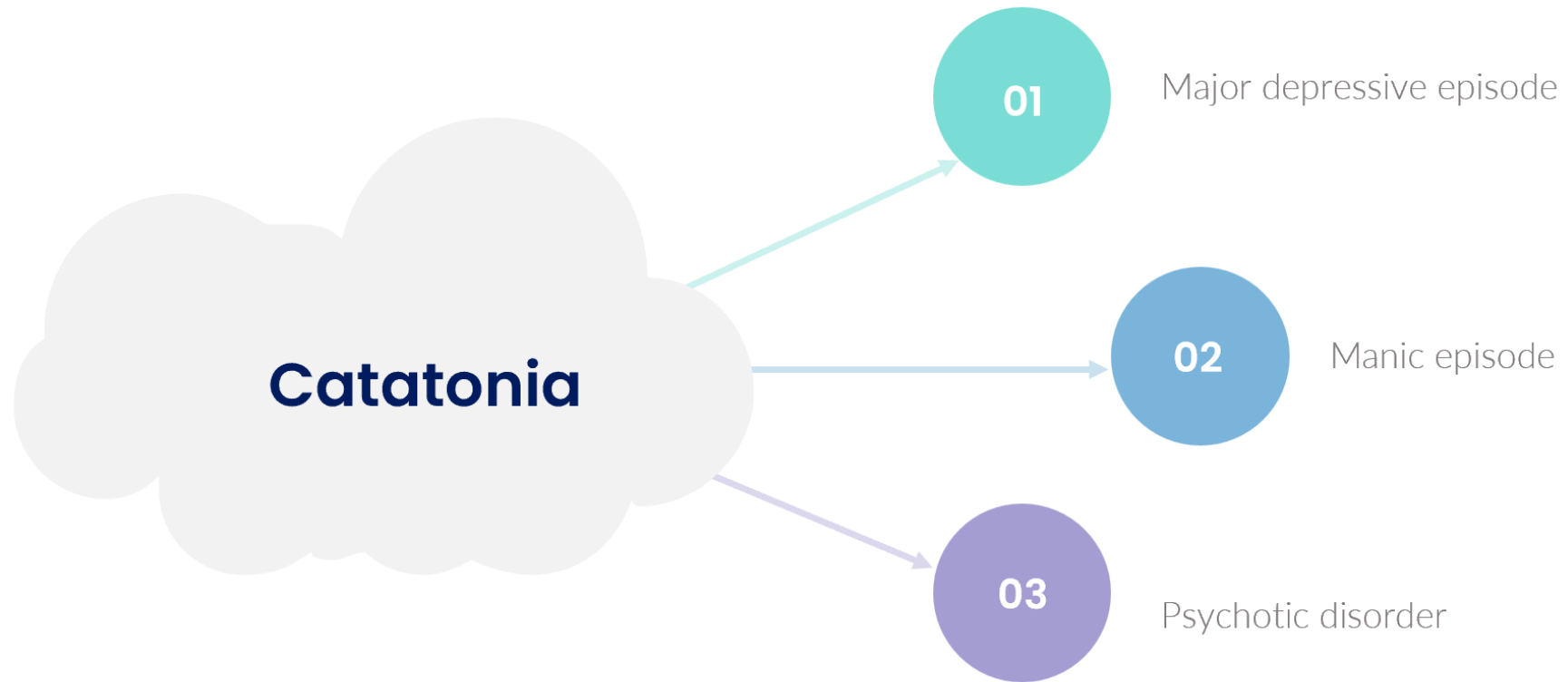
Antimanic > Antidepressant?

Not used that often.

- Intolerance to lithium / other antimanic agents
- Treatment refractory
- Requiring physical restraint or high doses of sedatives
- Life-threatening to self or others

Sienaert P. What we have learned about electroconvulsive therapy and its relevance for the practising psychiatrist. *Can J Psychiatry*. 2011 Jan;56(1):5-12. doi:10.1177/070674371105600103. PMID: 21324237.

When to use ECT



ECT in schizophrenia: a review of the evidence

Sandeep Grover, Swapnajeet Sahoo, Anjumoni Rabha and Raman Koirala

- Catatonia
- Suicidal behaviour
- Severe agitation
- Treatment resistance (augment pharmacotherapy).



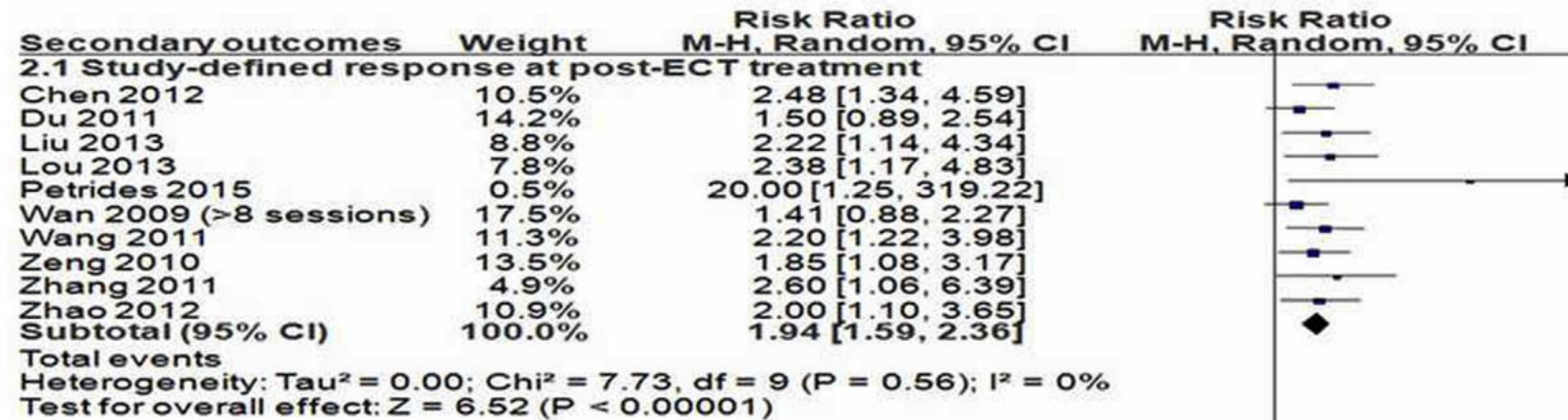
Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Journal of Psychiatric Research

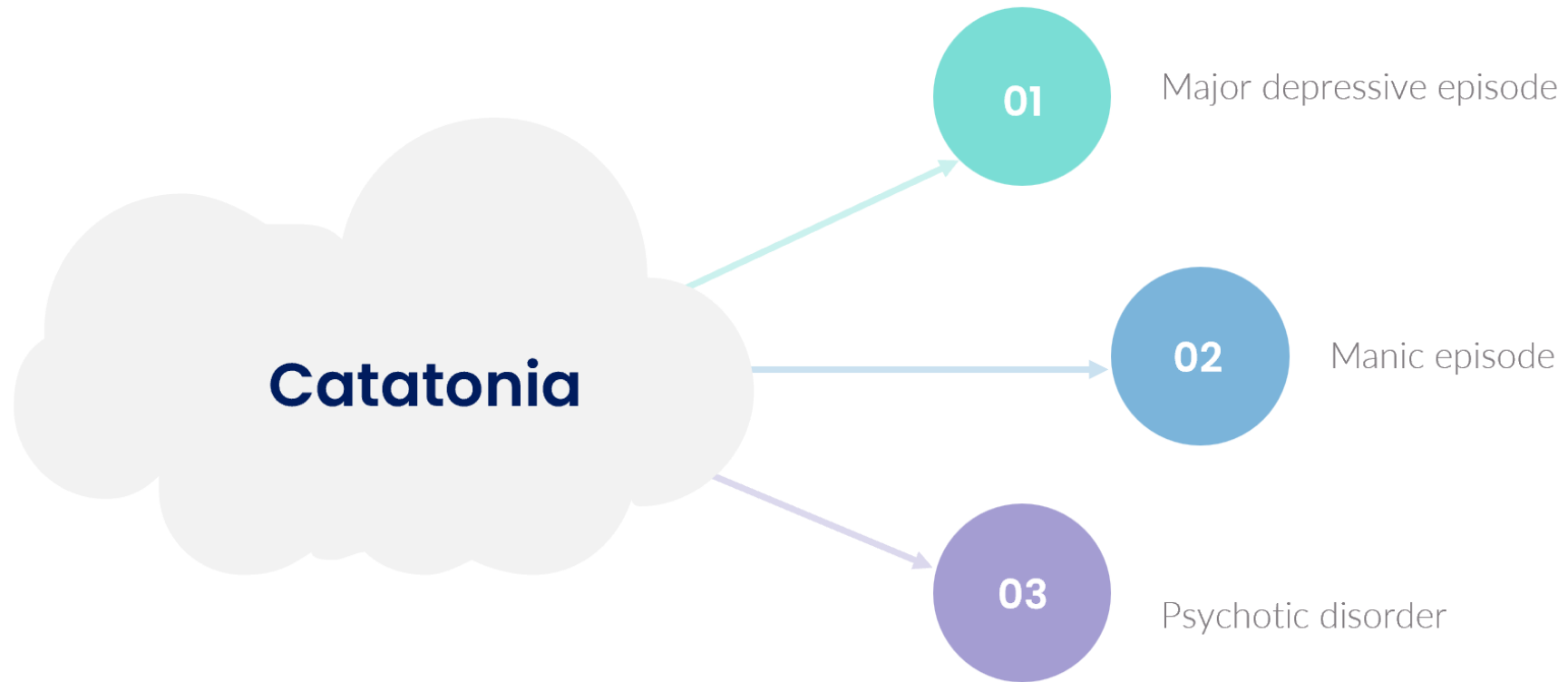
journal homepage: www.elsevier.com/locate/jpsychires

ECT augmentation of clozapine for clozapine-resistant schizophrenia: A meta-analysis of randomized controlled trials

Gang Wang^{a,1}, Wei Zheng^{b,*,1}, Xian-Bin Li^{a,1}, Shi-Bin Wang^{c,1}, Dong-Bin Cai^d, Xin-Hu Yang^b, Gabor S. Ungvari^{e,f}, Yu-Tao Xiang^{g,*}, Christoph U. Correll^{h,i,j}



When to use ECT

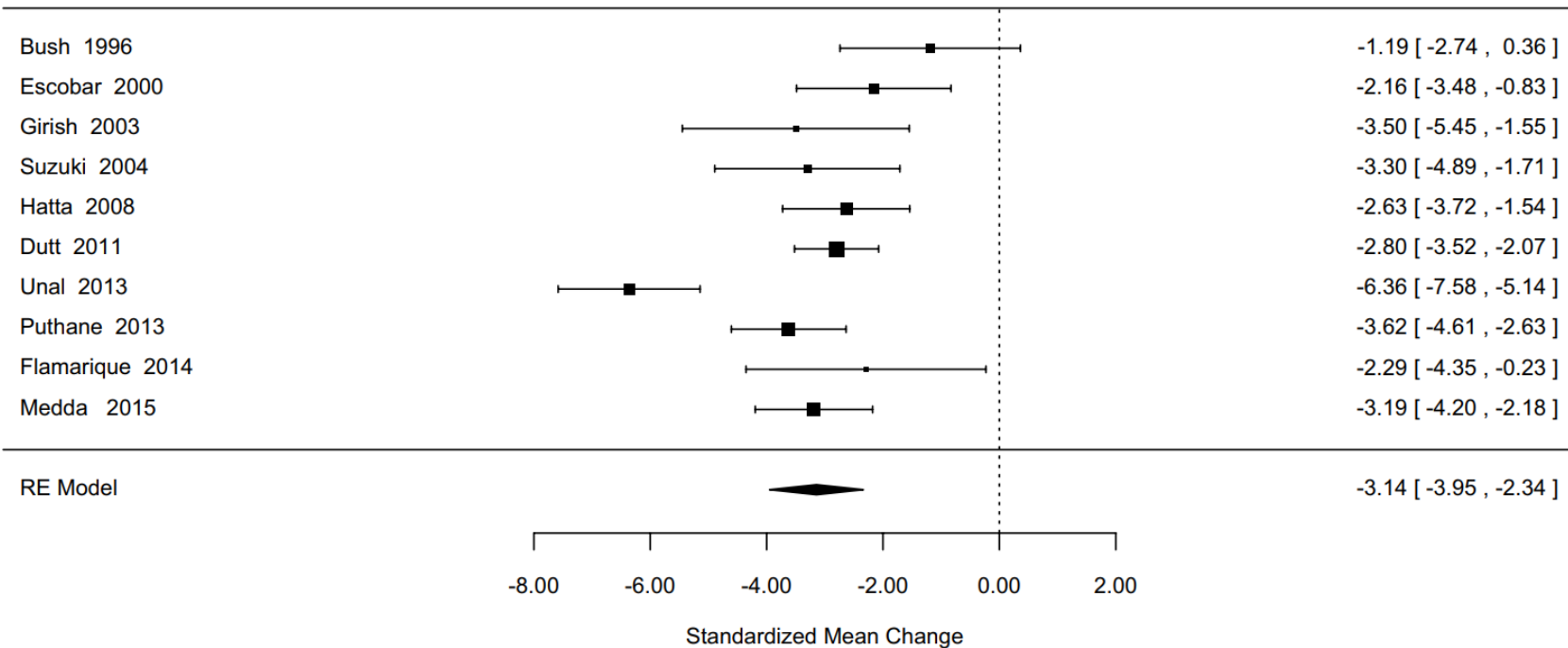


ORIGINAL PAPER

Is electroconvulsive therapy an evidence-based treatment for catatonia? A systematic review and meta-analysis

Arnaud Leroy¹ · Florian Naudet² · Guillaume Vaiva¹ · Andrew Francis³ · Pierre Thomas¹ · Ali Amad^{1,4}

>80%



Chapter 25

The psychopharmacology of catatonia, neuroleptic malignant syndrome, akathisia, tardive dyskinesia, and dystonia

PASCAL SIENAERT^{1*}, PETER VAN HARTEN², AND DIDI RHEBERGEN³

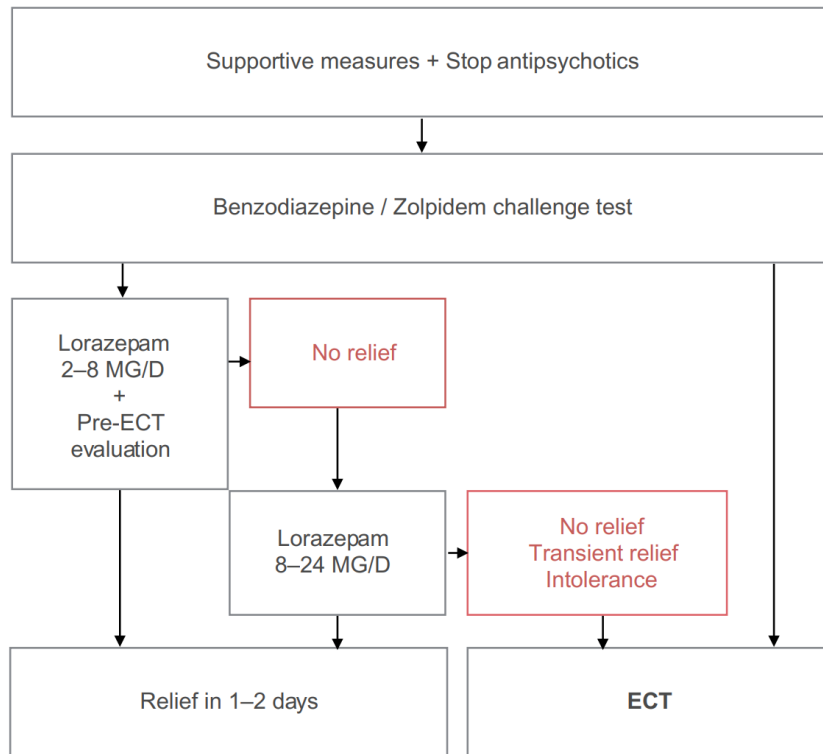


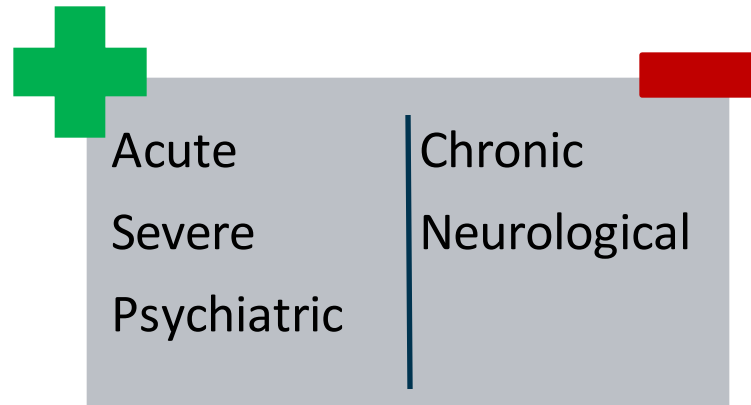
Fig. 25.1. Simplified treatment algorithm for catatonia.

Start ECT **without delay** when

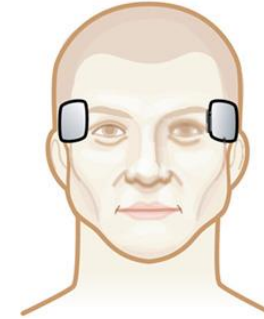
- Unresponsive to bzd or CI.
- Rapid response is required
- Underlying condition warrants treatment with ECT as first choice (psychotic depression)

Electroconvulsive therapy in catatonic patients: Efficacy and predictors of response

Federica Luchini, Pierpaolo Medda, Michela Giorgi Mariani, Mauro Mauri, Cristina Toni, Giulio Perugi



Optimizing ECT Technique in Treating Catatonia

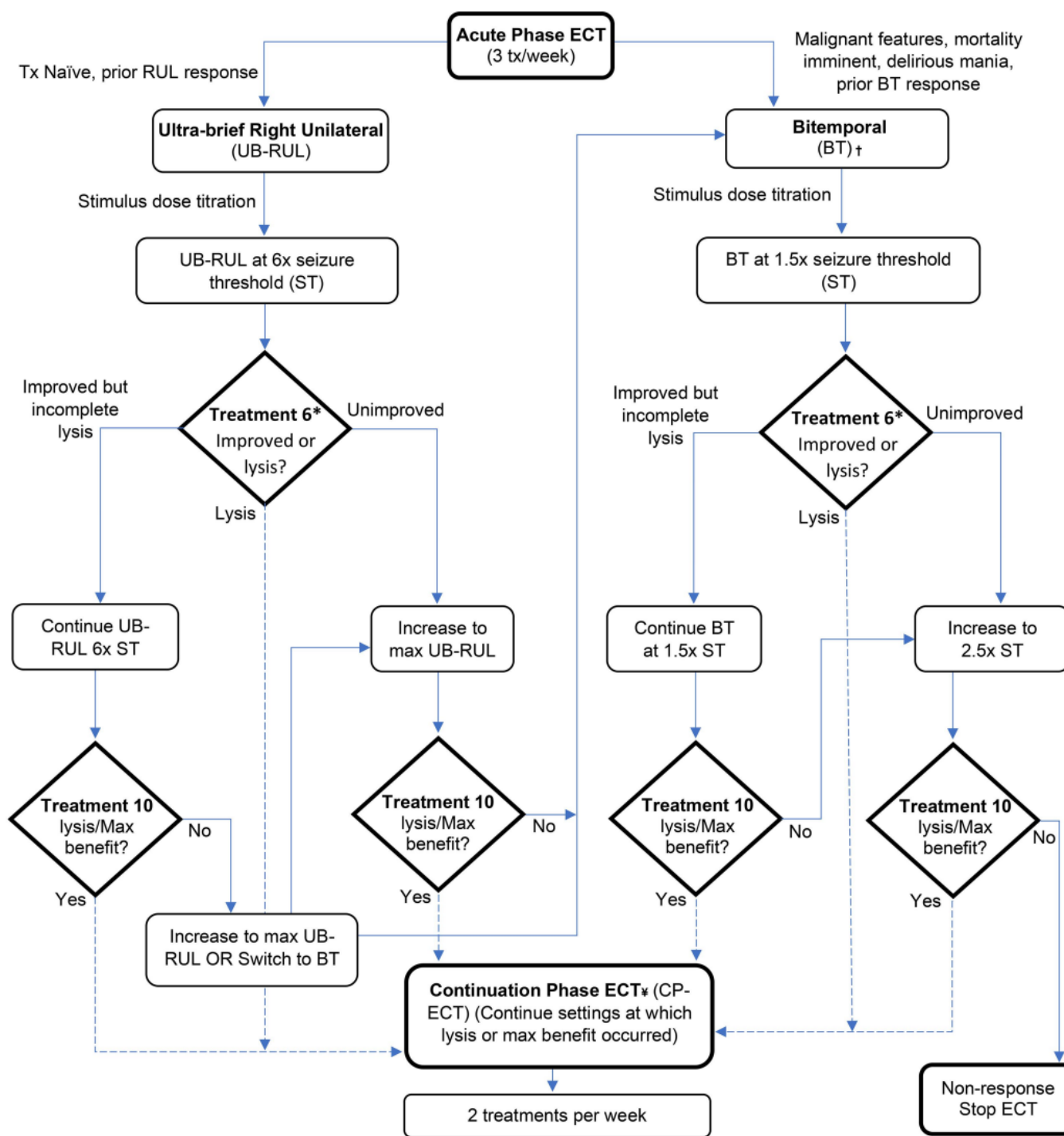


Max Fink, MD, Charles H. Kellner, MD,† and W. Vaughn McCall, MD‡*

General evolution → less powerful ECT.

Catatonia → needs more robust treatment.

- Bitemporal electrode placement, adequately dosed
- > twice a week (to daily) when needed
- Don't abruptly stop benzodiazepines (Flumazenil)



Lloyd JR, Silverman ER,
Kugler JL, Cooper JJ.
**Electroconvulsive Therapy
for Patients with
Catatonia: Current
Perspectives.**
Neuropsychiatr Dis Treat.
2020 Sep 25;16:2191-2208.
PMID: 33061390.





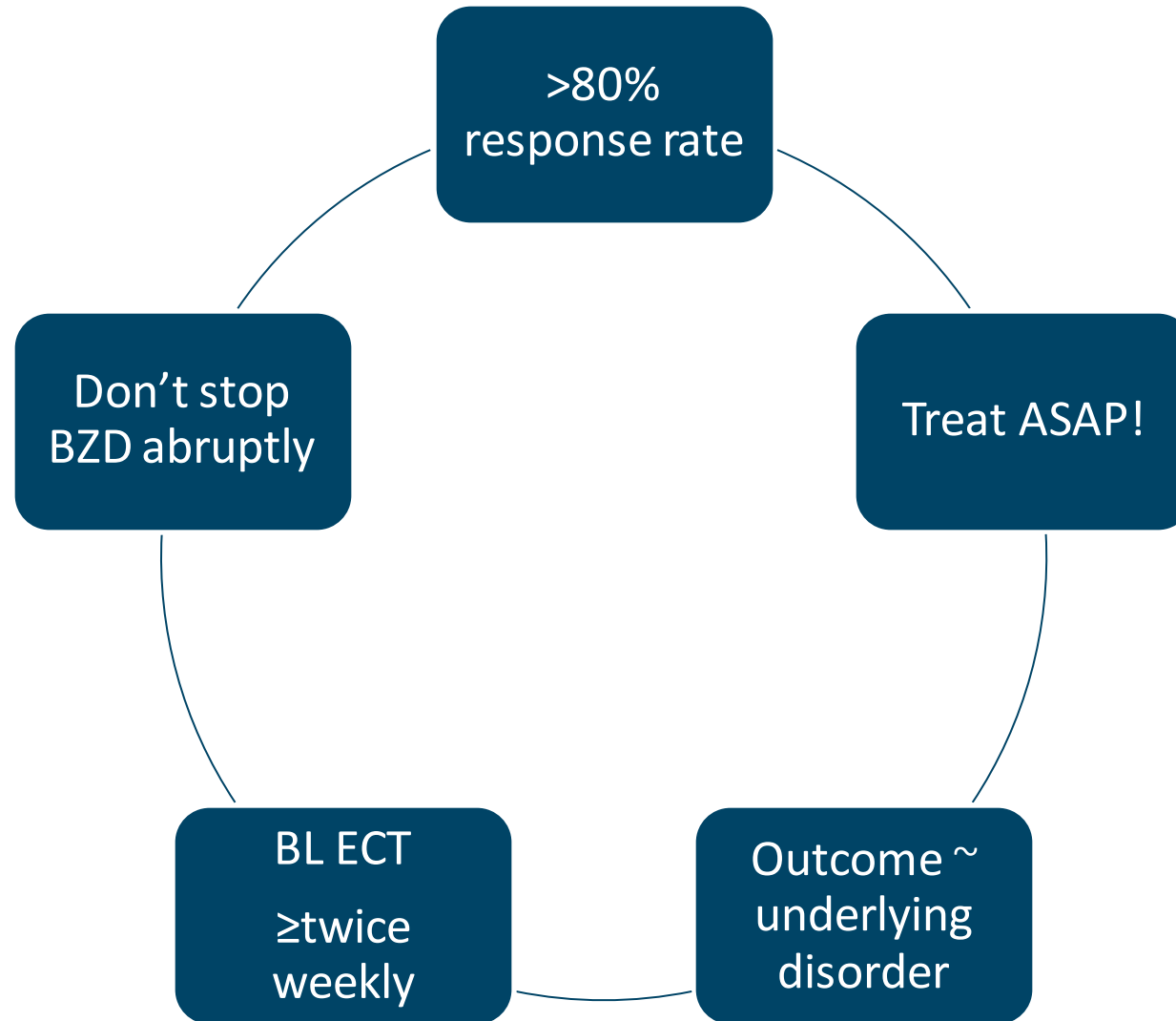
A clinical review of the treatment of catatonia

Pascal Sienaert^{1,2}, Dirk M. Dhossche³, Davy Vancampfort⁴, Marc De Hert⁴ and Gábor Gazdag^{5,6}*

- Number of treatments cannot be predicted.
- Often rapid response (one or a few sessions)
- Sometimes more treatments
- Treat until remission
- Maintenance ECT could be useful for sustained symptom remission.



ECT in catatonia





From Research to Clinical Practice

When to consider electroconvulsive therapy (ECT)

Kellner CH, Obbels J, Sienaert P. When to consider electroconvulsive therapy (ECT).

C. H. Kellner^{1,2} , J. Obbels³ ,
P. Sienaert³

Evidence-based consensus guidelines for the management of catatonia: Recommendations from the British Association for Psychopharmacology

Jonathan P Rogers^{1,2} , Mark A Oldham³, Gregory Fricchione^{4,5}, Georg Northoff⁶, Jo Ellen Wilson^{7,8}, Stephan C Mann⁹, Andrew Francis¹⁰, Angelika Wieck^{11,12}, Lee Elizabeth Wachtel^{13,14}, Glyn Lewis¹ , Sandeep Grover¹⁵, Dusan Hirjak¹⁶, Niraj Ahuja¹⁷, Michael S Zandi^{18,19}, Allan H Young^{20,2}, Kevin Fone²¹, Simon Andrews²², David Kessler²³, Tabish Saifee¹⁹, Siobhan Gee^{24,25} , David S Baldwin²⁶ and Anthony S David²⁷



Journal of Psychopharmacology
2023, Vol. 37(4) 327–369
© The Author(s) 2023

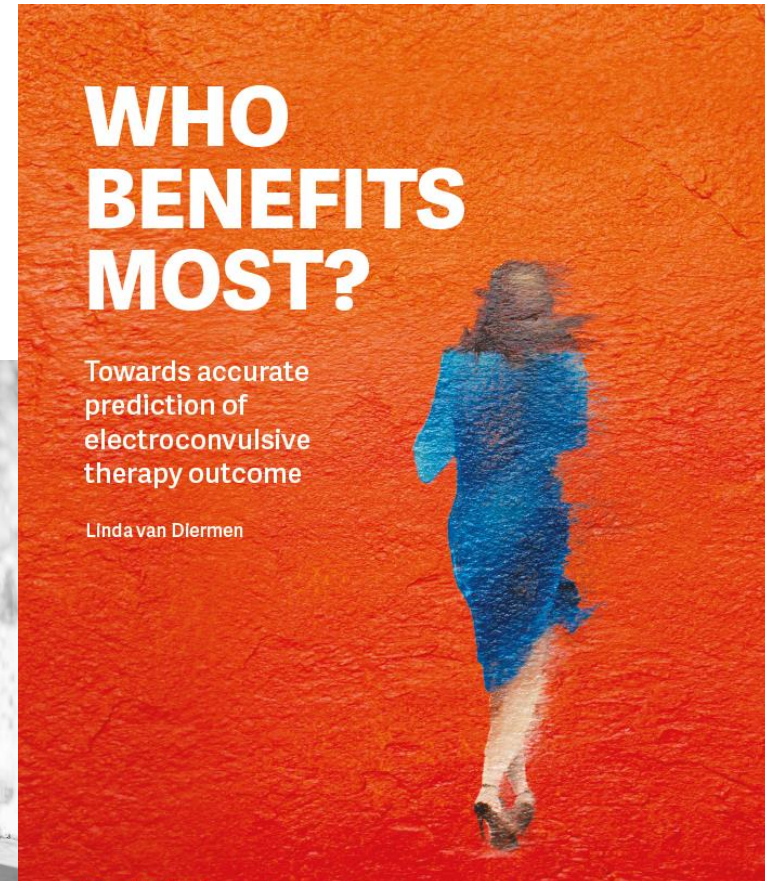


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DOI: 10.1177/02698811231158232
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Bedankt! Thanks!

linda.vandiermen@uantwerpen.be



ECT-resistant catatonia

17 patients in 12 case reports

Most had chronic catatonia in schizophrenia

What to do?

- Reconsider diagnosis
- Optimize ECT
- Consider lorazepam augmentation to ECT
- Cautious use of antipsychotics (aripiprazole, clozapine)
- NMDA-receptor antagonist

Current practice and attitudes towards ECT – a Norwegian perspective

Eivind Aakhus

MD, specialist in psychiatry, PhD

Head of Mental Health Research and Development

The Norwegian Centre for Ageing and Health



Ageing and Health
Norwegian National Centre

(Approximate) ECT standards in Norway

- There is still much we need to find out!
- Appr. 10.000 treatments/year (2022) (Ireland 2281 in 2021)
 - Each course 5-12 treatments: (833-2000 patients, estimate: 1200-1300, Ireland 450)
- Approximately 30 ECT-clinics across the country (Ireland 17)
- 100 % Thymatron IV
- Electrode placement
 - 95% RUL d'Elia
 - 5 % Bifrontal
- Dosing principle
 - 95% Age based
 - 5% stimulus titration

What we don't know:

- The rate of treatments given to patients who don't consent to ECT
 - Believe it to be less than 5 % of all treatments

Indications (Schweder et al. 2011, mhcir1 2022)

- 70% unipolar depression/19% bipolar depression
- 1% mania
 - Ireland 87% affective
- 4% schizoaffective disorders
- 1% schizophrenia, polymorphic psychoses
 - Ireland: 7 % nonaffective psychosis
- 3% mixed episodes
- 1% Parkinson disease
- 1% other
 - Ireland 6% neurotics, stress, somatoform, other
- Indication (main): 60% lack of psychopharmacological effect
- Gender: 65% Women
- Age, year groups:
 - <18 – 0%
 - 18-24 – 8%
 - 25-44 – 13%
 - 45-64 – 30%
 - >65 – 55%

Craving a
guideline!



The image shows the cover of a national guideline document. The top half has a dark teal background with a pattern of small, light blue dots. The bottom half is a solid dark teal color. A white horizontal band separates the two teal sections. On the left side, there is a vertical teal bar with white text. In the top right corner of the white band, there is a logo and text. The main title is in large white font.

Nasjonale faglige retningslinjer
IS-2629

 HelseDirektoratet

**Nasjonal faglig retningslinje om bruk av
elektrokonvulsiv behandling - ECT**

The National Quality Registry for ECT

- Approved by the Norwegian Health Directorate in 2022, released 2023
- Is implemented solely on a digital platform
- Reservation based
- Register clinical and technical data and patient reported outcome
 - During a course
 - 6 months after the course
- Collects information annually
 - Responsibility
 - Technical device an facilities
 - Training and certification



Kristine Elsa Krokli, Hallvard Lund-Heimark *Foto: Ute Kessler*



Nasjonalt kvalitetsregister for elektrokonvulsiv terapi (ECT)

Det Nasjonale ECT-registeret er et kvalitetsregister som inkluderer alle pasienter som mottar ECT-behandling i Norge. Registeret skal bidra til å forbedre og kvalitetssikre behandlingen og danne grunnlag for forskning. Registerets mål er blant annet å skaffe mer kunnskap om pasientene som får ECT, effekt og bivirkninger, samt pasientens opplevelse av behandlingen.

Informasjon til deg som pasient

Trykk her for mer utfyllende informasjon om hva som blir registrert, hvordan reservere seg, med mer.

[For pasienter →](#)

Til deg som skal bruke registeret

Trykk her for informasjon til de som skal registrere data i registeret, eller som ønsker å ta ut data fra registeret.

[Til deg som skal bruke registeret →](#)

Launched September
2023

Summary

- Attitudes are positive
- Norwegian ECT-practice is actively used, although there are regional variation.
- We will continue to use ECT extensively for patients with depression until more favourable options are available
- The introduction of the national ECT-registry will increase our knowledge

Dean's Grand Rounds



Free CPD Webinar- RCPsych Dean's Grand Rounds

**Enhancing Physician wellbeing through Innovative Tele-mentoring:
NAMA (National Alliance for Mental Health Assistance for Healthcare
Providers)**

11th January 2024 10.00-11.30 am (Time zone in London, UK (GMT))