ARE FUNCTIONAL TICS EASY TO DIAGNOSE? «NO»

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FULL DISCLOSURE #1
I read this volume twice before this controversy.
FULL DISCLOSURE #2: my first impact

Day 1

DM to TP on the phone, driving back home from the clinic:
«You know, I think these are real tics. They do look weird, though. So, they must be ’weird-looking tics’»

Day 2

DM to TP on the phone, driving back home from the clinic:
«Today three kids had the same ’weird-looking tics’. They really look like ’weird-ticcing replicants’»

Day 3

DM driving back home from the clinic, speaking to himself: «I give up, these must be some of the strange functional tics which Kirsten Müller-Vahl has recently written about»
THE 2 CORE DIAGNOSTIC CRITERIA OF FUNCTIONAL TIC-LIKE BEHAVIOURS selon Seigneur La Palice

1. «FTLBs are different from tics»
2. «FTLBs have something in common with other functional motor disorders»
Primary tics
Onset first two decades

Chorea- or myoclonus-like
TICS

simple tics

complex tics

More complex and patterned
Quasi-purposeful or voluntary behaviours

complexity

(1) a repetitive and patterned presentation; (2) inter- and intra-individual variability of type of movement and severity; (3) association with preceding sensory phenomena, also known as premonitory urges; and (4) partial or complete suppressibility by volition.
IF YOU CAN’T DEFINE IT, YOU CAN’T MEASURE IT

• «(Sudden), rapid, repetitive, nonrhythmic, (stereotyped) (motor) movement or vocalization involving discrete muscle groups» [APA; Leckman, 2006]

• «Brief movements (motor tics) or sounds (vocal tics) that occur intermittently and unpredictably out of a background of normal motor activity» [The Tourette Syndrome Classification Study Group 1993]

• Simple tics involving only one muscle group, unlike complex tics

• ARE WE ALL OK WITH THE SPECIFICITY OF THESE DEFINITIONS?
“FTLBs are different from tics”: Dilemma #1

• Is there a ‘phenomenological’ difference between tics and FTLBs?
• Or is it a matter of different frequency of otherwise ‘indistinguishable’ phenomena?
Do FTLBs have a specific body distribution?  
Maybe
Can tics in a specific body region predict diagnosis?  
No!

The somatotopy of tic inhibition: Where and how much?

Ganos et al., 2015

FTLBs are mostly complex: what is a complex tic?

*Complex* motor *tics* can be a combination of many simple motor *tics* or a series of movements that involve more than one muscle group.

what is a muscle group?

«a “muscle group” is exactly what it sounds like—a group of muscles situated close together on your body that perform similar movements. When it comes to building muscle, the six main muscle groups you should pay attention to are the: Chest. Back. Arms, etc.»

Hmmm……still not sure I know what a complex tic is………..
FTLBs include a lot of context-dependent coprophenomena: are these more similar to swearing or to coprolalic tics? ...there is an overlap zone....

• Context-dependence → tics are also highly suggestible (Ganos et al., 2016)
• Tics sometimes appear more frequently when patients know they are being observed in comparison to a covert observation (Piacentini et al., 2006)
• Sometimes the content of coprolallic tics can refer to attendant people
• Contextual information included in vocal tics is a feature that occurs more often in NOSI (Eddy & Cavanna, 2013)
• Are all coprolalic tics «ego-dystonic»?
Tic attacks and acute onset: always functional?

«In our opinion, it is crucial that clinicians in casualties and acute settings recognize this phenomenon and have a diagnostic formulation and framework that leads to active management, with tic attacks conceptualized as reflecting an acute anxiety response in TS, rather than tics per se or non-epileptic seizures». [Robinson & Hedderly, 2016]

What if the tics in a tic attack belong to the usual tic repertoire of the patient?
“FTLBs are similar to other functional motor disorders”:

Dilemma #2

• What is the ‘phenomenological’ similarity between FMDs and FTLBs?
FMD are ‘**distractible**’ (particularly functional ‘stereotypies’ and functional tremor)

- How to test: engage the patient in another motor or cognitive task and observe changes in the abnormal movement

- Well, it (usually) simply doesn’t work neither with FTLBs….nor with tics…….
FMD are ‘variable’ (particularly functional ‘stereotypies’ and functional tremor)

- How to test: observe changes during history taking/examination/arriving or leaving the examination room: periods of unexplained improvement/disappearance of symptom

- Seen in FTLBs, but how reproducible is this judgment of intrinsic variability?

- Variability in time course in both? Longer follow-up still warranted

- Different responses to different contexts, but how sensitive is this clinical sign?
Some FMD and PNES are ‘excessively long’

- How to test: observe over several minutes
- Patients with very severe tics (the DBS tics) may have extremely pervasive tics, with super-long ‘bouts’
- Complex tics and ‘dystonic’ tics in TS can be very long
FMD is associated with ‘expressive behaviour’ when performing a competing motor task

• How to test: assign a competing, ‘distracting’ motor task and look for “expressive” behavior displaying disproportionate effort to the task during examination

• Severe, ‘non-functional’ tics are pervasive and interfering with the voluntary flow of behaviour or speech (→ the ‘Interference’ item on the YGTSS)

• Both severe, ‘non-functional’ tics and FTLBs are so pervasive to ‘block’ other competing tasks
Neurophysiology hard to apply to this differential diagnosis

Highly frequent movements = difficult to demonstrate BP or other event-related measures (ERD, ERS)

Van der Salm et al., 2012
CONCLUSIONS

• No feature in this variant of FTLBs is pathognomonic and clearly not overlapping with tics

• None of the classical clinical descriptors of FMD is easily detectable in this variant of FTLBs

• WILL THIS ALWAYS BE THE CASE?

• No, but we need to approach this unsolved question, and wearing the «right spectacles»
Tics vs. FTLBs: another case of alexidiagnosia