

APPENDIX
THE UFMG SYDENHAM'S CHOREA RATING
SCALE (USCRS)

A. Instructions

USCRS was designed to rate the overall severity of Sydenham's chorea across different symptomatic dimensions. It is important to reassure that this is not a diagnostic scale.

The assessor should first complete the sections I and II (items 1–13) before performing the motor assessment (section III, items 12–21). The first two sections are completed based on all available information obtained from the patient and/or relatives. The style of the interview is semistructured, using the description of the items and the content of the anchor points as a guide. The third section is completed during the physical examination.

B. Inventory

I-Behavior (Information obtained from the patient and/or relatives)

1. Irritable behavior (impatient, impulsive, inflexible, uncooperative)
0 = absent
1 = minimal (less than 25% of the time)
2 = mild (between 25 and 50% of the time)
3 = moderate (more than 50% of the time, but less than 75%)
4 = severe (more than 75% of the time)
2. Attention deficit (difficulty sustaining attention in tasks or play activities)
0 = absent
1 = minimal (present, but without functional impairment)
2 = mild (with functional impairment, but the patient can perform activities demanding attention without help)
3 = moderate (the patient can perform activities with help)
4 = severe (the patient is unable to perform any activity demanding attention even with help)
3. Hyperactivity (distinct from chorea)
0 = absent
1 = minimal (present, but without functional impairment)
2 = mild (with functional impairment, but the patient can control him/herself without external warning)
3 = moderate (the patient can control him/herself only with external warning)
4 = severe (the patient can not be controlled even with external warning)
4. Obsessions (recurrent and/or persistent ideas, thoughts, or images)
0 = absent
1 = minimal (present, but without functional impairment)
2 = mild (with functional impairment, but the patient can perform most of the activities of daily living)
3 = moderate (the patient can not perform most of the activities of daily living)
4 = severe (activities of daily living are impossible)
5. Compulsions (uncontrolled repetitive behaviors)
0 = absent
1 = minimal (present, but without functional impairment)
2 = mild (with functional impairment, but the patient can perform most of the activities of daily living)
3 = moderate (the patient can not perform most of the activities of daily living)
4 = severe (activities of daily living are impossible)

TABLE 3. USCRS item loadings on two factors

USCRS items	Factor 1	Factor 2
Irritable behavior	0.49	0.70
Attention deficit	0.14	0.63
Hyperactivity	0.24	0.75
Obsessions	-0.02	0.61
Compulsions	-0.03	0.65
Verbal fluency	0.89	-0.14
Dysarthria-s	0.83	0.10
Chorea-s	0.81	0.46
Handwriting	0.81	0.23
Cutting food	0.91	0.13
Hygiene	0.91	0.04
Dressing	0.92	0.07
Walking	0.84	0.25
Ocular pursuit	0.76	0.07
Dysarthria	0.90	-0.07
Face chorea	0.86	0.20
Right arm chorea	0.77	0.32
Right leg chorea	0.84	0.22
Left arm chorea	0.75	0.39
Left leg chorea	0.79	0.32
Tongue protrusion	0.68	0.29
Right side finger tap	0.85	0.20
Left side finger tap	0.79	0.26
Right side leg agility	0.89	0.19
Left side leg agility	0.84	0.26
Muscle tone	0.86	0.14
Gait	0.94	0.10

USCRS, UFMG Sydenham's chorea rating scale; n = 84.

6. Verbal fluency

- 0 = normal
- 1 = minimally impaired (reduced spontaneous speech but without impairment of the communication)
- 2 = mildly impaired (reduced spontaneous speech with impairment of the communication)
- 3 = moderately impaired (spontaneous speech abolished, but able to speak when requested)
- 4 = severely impaired (no speech even when requested)

II-Activities of Daily Living (Information obtained from the patient or relatives)

7. Dysarthria

- 0 = absent
- 1 = minimal (present, but completely comprehensible, or speech easily understood)
- 2 = mild (less than 25% of the speech is incomprehensible, or some difficulty in understanding speech)
- 3 = moderate (25-50% of the speech is incomprehensible, or marked difficulty in understanding speech)
- 4 = severe (incomprehensible speech)

8. Chorea

- 0 = absent
- 1 = minimal (present, but without functional impairment)
- 2 = mild (with impairment of some motor or functional activities)
- 3 = moderate (with impairment of many motor or functional activities)
- 4 = severe (completely disabled)

9. Handwriting

- 0 = normal
- 1 = minimally impaired (compromised handwriting, but all words are legible)

- 2 = mildly impaired (not all words are legible)
- 3 = moderately impaired (the majority of words are not legible)
- 4 = severely impaired (impossible handwriting)

10. Cutting food and handling utensils

- 0 = normal
- 1 = minimally impaired (difficulty with these tasks, but no help needed)
- 2 = mildly impaired (occasional help needed, e.g., cutting meat)
- 3 = moderately impaired (frequent help needed)
- 4 = severely impaired (needs to be fed)

11. Hygiene

- 0 = normal
- 1 = minimally impaired (difficulty with hygiene tasks, but no help needed)
- 2 = mildly impaired (occasional help needed)
- 3 = moderately impaired (frequent help needed)
- 4 = severely impaired (completely dependent)

12. Dressing

- 0 = normal
- 1 = minimally impaired (difficulty with dressing, but no help needed)
- 2 = mildly impaired (occasional help needed)
- 3 = moderately impaired (frequent help needed)
- 4 = severely impaired (completely dependent)

13. Walking

- 0 = normal
- 1 = minimally impaired (walks with difficulty, but does not run into objects)
- 2 = mildly impaired (walks with difficulty, running into objects)
- 3 = moderately impaired (walks only with assistance)
- 4 = severely impaired (chorea paralytica; cannot walk at all, even with assistance)

III-Motor Assessment

14. Ocular pursuit (horizontal and vertical)

- 0 = normal or complete
- 1 = minimally impaired (jerky movement)
- 2 = mildly impaired (interrupted pursuits, but preserved full range)
- 3 = moderately impaired (incomplete range)
- 4 = severely impaired (cannot pursue)

15. Dysarthria

- 0 = absent
- 1 = minimal (present but completely comprehensible, or speech easily understood)
- 2 = mild (less than 25% of the speech is incomprehensible, or some difficulty in understanding speech)
- 3 = moderate (25-50% of the speech is incomprehensible, or marked difficulty in understanding speech)
- 4 = severe (more than 50% of speech is incomprehensible)

16. Chorea (Test face and each limb)

- 0 = absent
- 1 = minimal (action chorea, or intermittent rest chorea)
- 2 = mild (continuous rest chorea, but without functional impairment)
- 3 = moderate (continuous rest chorea with partial functional impairment)
- 4 = severe (continuous rest chorea with complete functional impairment)

17. Tongue protrusion

- 0 = can hold tongue protruded for more than 1 minute
- 1 = can hold tongue protruded for more than 30 seconds
- 2 = can hold tongue protruded for more than 10 seconds
- 3 = can hold tongue protruded for less than 10 seconds
- 4 = cannot protrude tongue

18. Finger taps (Patient taps thumb with index finger in rapid succession with widest amplitude possible. Test right and left)

- 0 = normal (>15/5 sec)
- 1 = minimally impaired (mild slowing and/or reduction in amplitude, 11–14/5 sec)
- 2 = mildly impaired (occasional arrests in movement, 5–10/5 sec)
- 3 = moderately impaired (frequent hesitation in initiating movements or arrests in ongoing movements, <5/5 sec)
- 4 = severely impaired (cannot perform the task)

19. Leg agility (Patients taps heel on ground in rapid succession with widest amplitude, picking up entire leg)

- 0 = normal
- 1 = minimally impaired (mild slowing and/or reduction in amplitude)
- 2 = mildly impaired (occasional arrests in movement)
- 3 = moderately impaired (frequent hesitation in initiating movements or arrests in ongoing movements)
- 4 = severely impaired (cannot perform the task)

20. Muscle tone (Test each limb. The value is the sum of the muscle tone for each limb divided by 4)

- 0 = normal
- 1 = minimal decrease (not apparent when the contralateral limb is simultaneously moved)
- 2 = mild decrease (apparent even when the contralateral limb is simultaneously moved, but without functional impairment)
- 3 = moderate decrease (apparent even when the contralateral limb is simultaneously moved and with functional impairment)
- 4 = severe decrease (loss of postural tone)

21. Gait (Evaluate the gait of the patient while walking at least 10 m over a line distant 50 cm from the wall)

- 0 = normal
- 1 = minimally impaired (walks with difficulty, but does not run into objects)
- 2 = mildly impaired (walks with difficulty, running into with objects)
- 3 = moderately impaired (walks only with assistance)
- 4 = severely impaired (chorea paralytica; cannot walk at all, even with assistance)

Acknowledgments: This work was supported by the Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Brazil.