Phenomenology of Leg Stereotypy Syndrome

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BACKGROUND

Leg stereotypy syndrome (LSS), previously named leg stereotypy disorder (1), consists of repetitive, rhythmic, stereotypic leg movements, primarily when seated but occasionally also when standing. Although a common and familial condition that must be differentiated from other leg movements, including restless legs syndrome, akathisia, and tics, LSS has not been studied in a systematic fashion.

The prevalence of LSS is approximately 7% in a randomly selected healthy population and 17% in a cohort consisting of patients with mixed movement disorders (2).

OBJECTIVE

To describe the phenomenology of leg stereotypy syndrome.

METHODS

We reviewed our video database of patients seen at the Baylor College of Medicine Parkinson’s Disease Center and Movement Disorders Clinic to identify patients with LSS according to published criteria (3).

A detailed review of each video was then conducted in order to characterize the phenomenology. All patients were subsequently administered a questionnaire capturing clinical questions of relevance to LSS.

Diagnostic research criteria for leg stereotypy syndrome (2):
- Involuntary, repetitive, and continuous leg movements while seated.
- No diurnal variation in movements.
- Movements occur typically during concentration.
- Movements may be associated with an inner feeling of restlessness.
- Leg movements were self-aware or noted by others.

RESULTS

We identified 20 patients with a diagnosis of LSS and video documentation.

- On a 5-item LSS severity rating scale, symptoms were generally mild and not associated with adverse outcome with home or work activities.

- On review of the videos, LSS was predominantly unilateral in five (25%) and bilateral in 15 (75%). All subjects had symptoms when sitting. Eight (80%) had rhythmic, flexion-extension of the hip, knee, and ankle, six (30%) exhibited side-to-side movements of the legs, and seven (35%) exhibited inversion-eversion of the ankle. No patients had symptoms only when standing. Of the seven (35%) patients who also had symptoms while standing, four (20%) had leg flexion or knee buckling and five (25%) displayed swaying movements of the body.

MODIFIED LEG STEREOTYPY SCREENING QUESTIONNAIRE

1. Have you ever noticed your legs moving involuntarily, repetitively and continuously while sitting in a meeting, waiting rooms, car, airplane or other situations requiring prolonged sitting?
2. Are the movements associated with an inner feeling of restlessness or urge to move?
3. Do you try to consciously control or suppress the leg movements?
4. Do the leg movements occur any particular time of the day (not just in the evening)?
5. Are the leg movements more likely to occur when you are concentrating?
6. Are the leg movements more likely to occur when you are bored?
7. Are the leg movements distressing, disrupting, or annoying to others?
8. Do you have “swaying” or other involuntary movements of the body when sitting or standing?
9. Do you have any close relatives with similar leg movements?

CONCLUSIONS

LSS is a common, yet poorly characterized, distinct, familial genetic, condition manifested chiefly by repetitive leg and foot movements when sitting or body swaying when standing.

Although the pathophysiology is not well understood genetic factors probably play an important role.

Treatment of LSS is usually not necessary as patients are commonly not bothered by their leg movements, although they may be disruptive to others.

REFERENCES

2. Loia MA, York MK, Shutt AM, Jankovic J. Leg stereotypy syndrome: phenomenology and prevalence. J Neurol Neurosurg Psychiatry. 2018; (epub)