

Autonomic Dysfunction and its Complete Correction in Spinal Cord Injury, M. Parkinson, Cerebellar Atrophy typ C and Aging

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ARTICLE INFO

Received: 📅 October 18, 2025

Published: 📅 October 29, 2025

Citation: Jakob Bodziony. Autonomic Dysfunction and its Complete Correction in Spinal Cord Injury, M. Parkinson, Cerebellar Atrophy typ C and Aging. Biomed J Sci & Tech Res 63(4)-2025. BJSTR. MS.ID.009933.

Short Paper

Autonomic dysfunction (AD), also known as dysautonomia, refers to a group of conditions that result from damage to the nerves that manage everyday body processes. (Figure 1) These nerves are part of our autonomic nervous system, which controls unconscious or involuntary actions and impaired sensations. Autonomic dysfunction can have many causes [1]. We investigated 34 Patients with Spinal Cord Injury, 2 Patients with Parkinson's Disease, 2 Patients with Multiple System Atrophy [2] and 3 Patients aging more as 75 years. Symptoms were widespread and include:

1. Anosmia – loss of smell
2. Salivary gland dysfunction, hypersalivation
3. Vision problems: This might include sensitivity to light, blurry vision, or failure of the pupils to react appropriately to light
4. Temperature control issues: People cannot sweat, do not differentiate between cold and warm.
5. Impaired sensation: This might include numbness, tingling, weakness, pain, remapping and can lead to injury and balance problems.
6. Dysphagia, pharyngoesophageal dysfunction
7. Problems with heart rate and blood pressure: These can lead to dizziness, fainting, and falls.
8. Digestive problems: These can include abdominal bloating, nausea, constipation, or diarrhea.
9. Urinary issues: This might involve frequent urination, urinary incontinence, or difficulty starting to urinate.
10. Anorectal dysfunction, constipation
11. Sexual problems: In men, this might be erectile dysfunction. In women, this might be vaginal dryness or difficulty achieving orgasm.

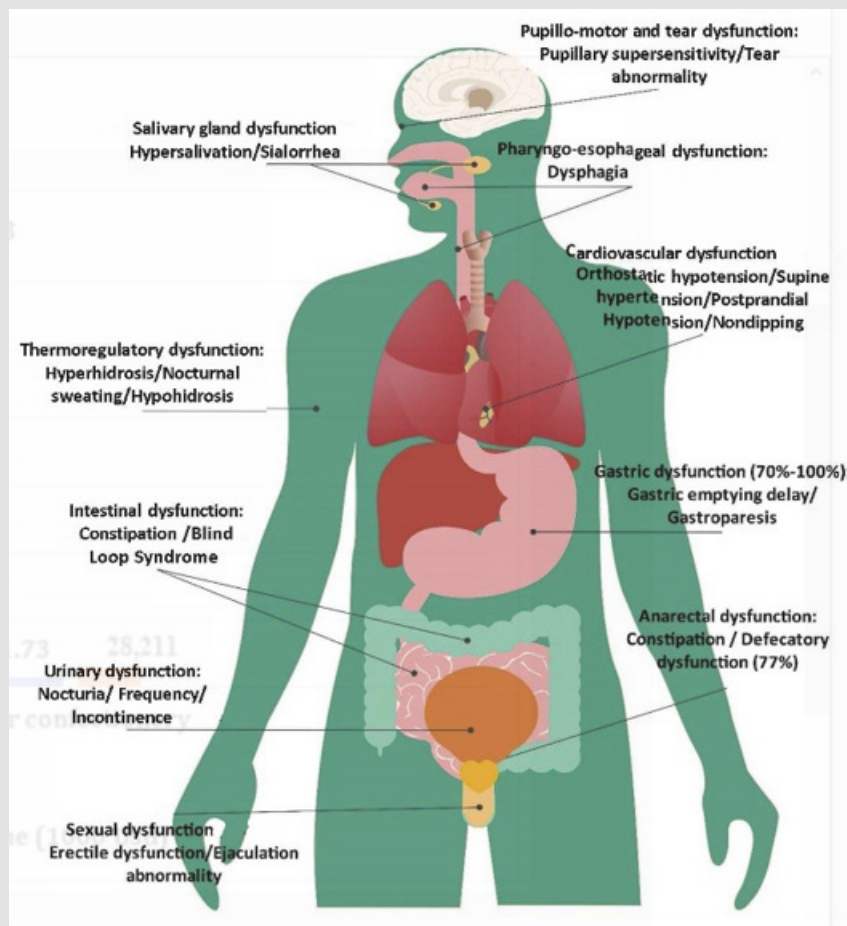


Figure 1: Autonomic dysfunction.

Autonomic dysfunction (AD) is a prevalent health problem that remains underdiagnosed, undertreated, underappreciated and underrated across healthcare systems [3]. The cause of this is the failure of completely correct of AD. Treatment for AD typically involves only managing symptoms. We was presented a new therapy method with the use of specially activated (Patent Pending) intrathecal autologous BMC (Bone Marrow Concentrate) with about 10% stem cells) + Movement Therapy + Neuromodulation which can completely correct Autonomic Dysfunction [4,2,5]. The mechanism is unclear. Human bone marrow MSC secretes a lot of exosomes, tiny vesicles released by enabling cell-to-cell communication. In our unpublished in vitro observations, if the cells are placed in a bioreactor; they secrete exosomes for many months. We suggest that a similar situation takes place in vivo in liquor, and is responsible for the activation of sympathetic ganglia, with their diverse regulations: pupillomotor, tear,

salivary, pharyngo-esophageal, cardiovascular, sweating, thermoregulatory itestinal, gastric, anorectal, Presented partly on 13th World Congress of Neurorehabilitation, 22-25.05.2024 Vancouver, Canada and 12th International Congress of Anti-Aging and Regenerative Medicine, 5-7.07.2024 Kuala Lumpur, Malaysia Human bone marrow MSC are secreting a lot of exosomes, a tiny vesicles released by cells, that contain proteins, lipids, and nucleic acids, enabling cell-to-cell communication.

In our not published in vitro observations, if the cells are placed in bioreactor they secrete EV through many months. We suggest, that similar situation take place in vivo in liquor; and is responsible for activation of sympathetic ganglions, with their diverse regulations: pupillomotor, tear, salivary, pharyngo-esophageal, cardiovascular, sweating, thermoregulatory, intestinal, gastric, anorectal, urinary and sexual.

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ISSN: 2574-1241

DOI: 10.26717/BJSTR.2025.63.009933

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