Multiple System Atrophy
MSA

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It is a Neurodegenerative Disorder

Types
1 Shy -Drager Syndrome
2 Olivopontocerebellar Atrophy
3 Striatonigral Degeneration

History
Described by Milton Shy and Glen Drager in 1960

Incidence
3 to 5 per 100,000 population
USA has 15 000 to 50 000 patients
All races
In Japanese there is a genetic abnormality
SHC3 gene deletion

This genetic abnormality is not seen in the American patients

Age
Average 50 to 59 years
Can start at 30 y

Sex
Males 55%

Course
Lasts for 7 to 10 years
Few patients last 12 years
Very few last 15 years

Pathology
Alpha Synnuclein protein is deposited in the neurons and glia

Types
MSA C Cerebellum
MSA. P. Parkinsonism

Organs involved
Basal Ganglia
Cerebellum
Brain Stem - Autonomic Fn
Breathing. Heart rate. BP

Clinical
Tremors ,Parkinsonism
Ataxia
Postural hypotension
Fainting
Fall
Urinary incontinence
Fecal incontinence
Constipation
Sexual Dysfunction
REM Sleep disturbed
Sweating decreased
Dry mouth
Visual problems
Sleep apnea
Cognitive and emotional disturbances
Anxiety ,depression emotional instability
Laughing and crying
Panic attacks
Suicide
Self harm

Ataxia
Tremors
Wide steps while walking
Eyes nystagmus

Stiffness, rigidity
Slurred speech

Diagnosis
1 clinical
2 CT
3 MRI
4 PET CT
5 Dopamine Transporter scan
6 skin biopsy
7 genetic analysis
Japanese have SHC3 deletion

Treatment
No cure
L Dopa poor response

Symptomatic treatment
Hospice
Palliative care
Walk with a cane or walker
Wheelchair

Cause of death
Infection
UTI
Sepsis
Sudden death
Aspiration Pneumonia
Cachexia

Mental health
Physical health

May need
Tracheostomy
Feeding tube
Indwelling catheter
Colostomy

(Dr. R.G. Wiseman Pinto is a Professor of Pathology, former Head of Department at Goa Medical College, former Dean of Goa University, and the current President of the Asian Society of Cytopathology.)