

# Duane's Retraction Syndrome

Sahar Lotfi

MSc of Optometry



# Duane's Retraction Syndrome

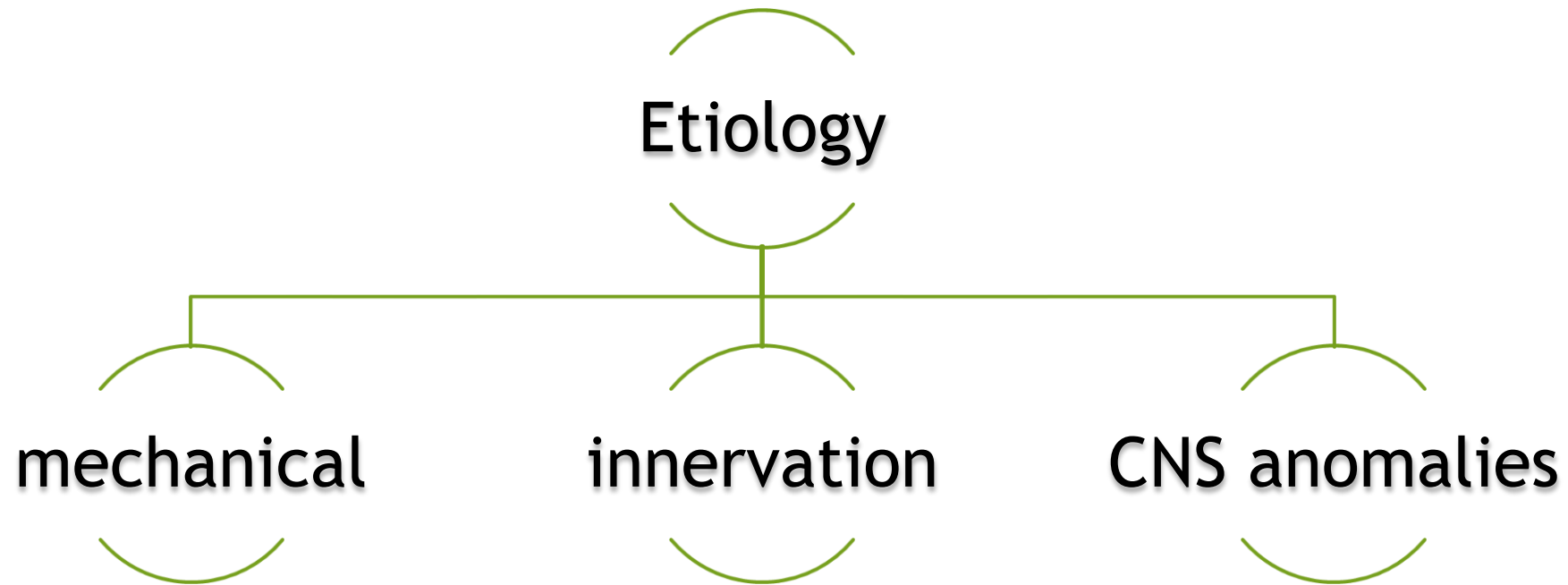
- ▶ DRS is referred to in literature as Stilling-Turk-Duane syndrome.
- ▶ DRS is a congenital disorder of ocular motility
- ▶ **Characteristics:**
  - ❑ Variable horizontal duction deficits
  - ❑ Narrowing of the palpebral fissure on adduction
  - ❑ Retraction of the globe on adduction
  - ❑ Upshoot & downshoot



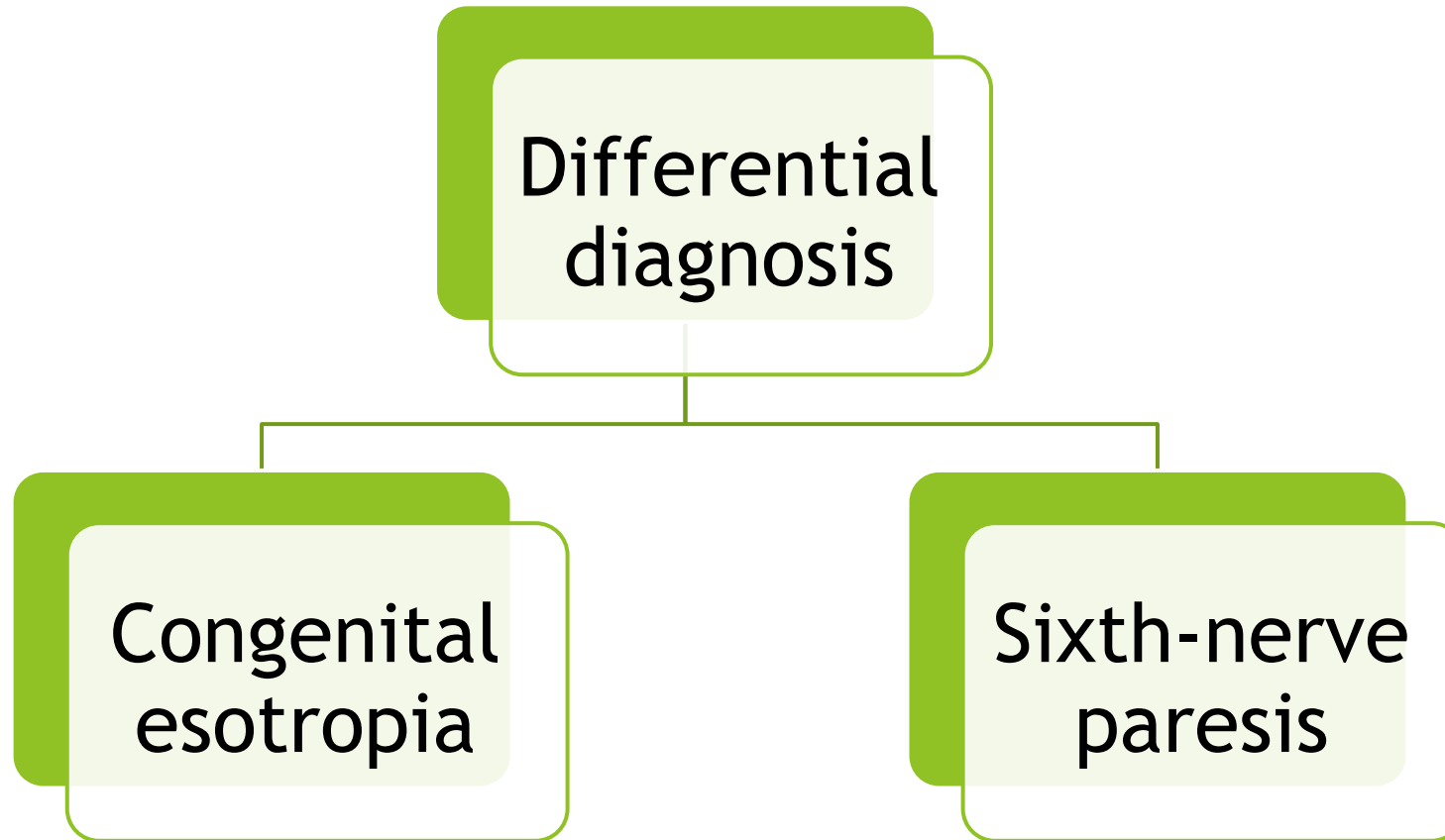
# Duane's Retraction Syndrome

- ▶ ***Classification (Huber)***
- ▶ Type I: Marked limitation abd & Normal add  
Retraction globe & Narrowing palpebral fissure  
Paradoxical innervation of the LR & Normal MR
- ▶ Type II: Marked limitation add & Normal abd  
XT in primary position  
Retraction globe & Narrowing palpebral fissure  
Peak impulse in abd & Normal MR
- ▶ Type III: complete limitation abd & add  
Retraction globe & Narrowing palpebral fissure  
simultaneous innervation of LR and MR

# Duane's Retraction Syndrome



# Duane's Retraction Syndrome



# Duane's Retraction Syndrome

- ▶ *Management of DRS*
- ▶ The aims of treatment for DRS are to achieve eye alignment in the primary position, to eliminate abnormal head posture (AHP), and to prevent amblyopia.
- ▶ Surgical indications: Deviation in pp
  - AHP
  - Marked globe retraction
  - Large upshoot & downshoot

# Duane's Retraction Syndrome

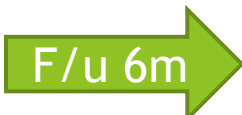
- ▶ *Management of Duane retraction syndrome with prismatic glasses (2017)*
- ▶ **Results:** mean age: 11.2 years  
N: 12 cases(7 females (58.3%) ,5 males (41.7%))  
Type of DRS: 11 (91.7%) type I.  
All 12 patients had abnormal head posture and an angle of mean deviation equaling 10 PD.
- ▶ **Conclusion:** Treatment was individualized on a case-by-case basis. Prismatic glasses are useful for eliminating abnormal head posture and ocular misalignment in selected cases.

# Duane's Retraction Syndrome

- ▶ ***Botulinum toxin injection in the patients with Duane syndrome type I (2016)***

- ▶ Results: N: 16 cases (6 males).

mean ET:  $26.27 \pm 8.35$  PD   $13.5 \pm 12.39$  PD ( $p < 0.001$ ).

Face turn:  $18.27$    $7$  ( $p < 0.001$ ).

success: complete 6 (37.5%), partial 4 (25%), failure 6 (37.5%).

No complication during injection.

significant relation between the amount of FDT and the success rate ( $p: 0.019$ ).

- ▶ Conclusions: Botulinum toxin could be an alternative treatment in Duane syndrome with appropriate case selection. FDT could be a predictive factor for response to botulinum toxin.



**THANK YOU FOR  
ATTENTION**

