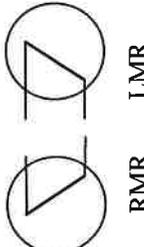
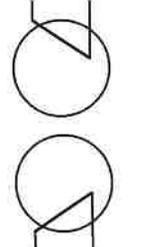
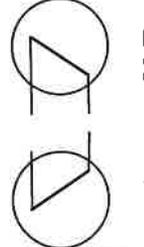
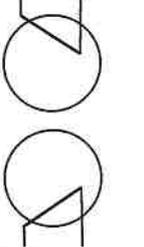


		VERTICAL THEORIES					
HORIZONTAL THEORIES		INNERVATIONAL	ANATOMICAL		SECONDARY ACTIONS		
INNERVATIONAL	ANATOMICAL	BROWN	STANWORTH	GOBIN	URRETS-ZAVALIA		
	URIST	POSTIC					
V ESO	o/a MR	MR insertion too high	u/a SO	Anterior SO	Sagittallised IO	Anti – Mongoloid	IO action superior in esotropia
V EXO	o/a LR	LR insertion too low	u/a SR	Posterior IO	Sagittallised IO	Mongoloid	IR action superior in exotropia
A ESO	u/a LR	LR insertion too high	u/a IO	Anterior IO	Sagittallised SO	Mongoloid	SO action superior in esotropia
A EXO	u/a LR	MR insertion too low	u/a IR	Posterior SO	Sagittallised SO	Anti-Mongoloid	SR action superior in exotropia

SURGERY OPTION

	HORIZONTAL RECTI		VERTICAL MUSCLES WEAKENING	VERTICAL MUSCLES STRENGTHENING	ANTERO – POSITIONING GOBIN	TRANSPLANTING VERTICAL RECTI (not often done)
		BOYDS TECHNIQUE				
V ESO	Recess MR Move insertions down 		Recession / Myectomy IO	Strengthen SO (tuck)	Antero – Positioning of IO	Move IR temporarily (less adduction in downgaze)
V EXO	Recess LR Move insertions up 		Recession / Myectomy IO	Strengthen SR (not done!)	Antero – Positioning of IO	Move SR nasally (more adduction in upgaze)
A ESO	Resect LR Move insertions down 		Weaken SO	Strengthen IO (not done!)	Antero – Positioning of SO	Move SR temporarily (less adduction in upgaze)
A EXO	Resect MR Move insertions up 		Weaken SO	Strengthen IR (not done!)	Antero – Positioning of SO	Move IR nasally (less adduction in downgaze)

V ESO PATTERN

Difference of 15 dioptres between up and down gaze

Look for:

- AHP, chin depression
- Increase in eso on depression, decrease on elevation
- MR o/a
- MR insertions too high
- SO u/a, IR o/a, IO o/a, SR u/a
- SO anterior (weaker)
- IO sagittalised (strong)
- antimongoloid fissures
- updrift of either eye on contralateral versions (IO o/a)

Management:

- Recess MR and move insertions down
- Boyd MR (weaken)
- Recess / myectomy IO
- Tuck / Harada Ito SO
- Transpose IR temporally (decreasing adduction in depression)

V EXO PATTERN

Look for:

- AHP, chin elevation
- Increase in exo on elevation, decrease on depression
- LR o/a
- LR insertions too low
- SR u/a, IO o/a, IR o/a SO u/a
- IO posterior (strong)
- IO sagittalised (strong)
- Mongoloid fissures
- Downdrift of either eye on ipsilateral versions (IR o/a)

Management:

- Recess LR and move insertions up
- Recess / myectomy IO
- Transpose SR nasally (increasing adduction on elevation)

IO o/a SR u/a
 V
 IR o/a SO u/a

A ESO PATTERN

Difference of 10 dioptres between up and down gaze

Look for:

- Chin elevation
- Increasing eso on elevation, decreasing eso on depression
- LR u/a
- LR insertions too high
- IO u/a, SR o/a, SO o/a, IR u/a
- IO positioned anteriorly (weak IO)
- SO sagittalisised (strong SO)
- Mongoloid fissures
- Downturns of either eye on contralateral versions (IO u/a)

Management:

- Resect bilateral LR and move insertions down
- Tenectomy / tenotomy SO
- Transpose SR temporally (decreasing adduction on elevation)
- Boyd MR (weaken) and move insertions up

A EXO PATTERN

Look for:

- Chin depression
- Increasing exo on depression, decreasing exo on elevation
- MR u/a
- MR insertions too low
- IR u/a, SO o/a, SR o/a, IO u/a
- SO posterior (strong)
- SO sagittalisised (strong)
- Anti mongoloid fissures
- Upturns of either eye on ipsilateral versions (IR u/a)

Management:

- Resect MR and move insertions up
- Recess LR and move insertions down
- Boyd (weaken) LR
- Tenectomy / tenotomy SO
- Transpose IR nasally (increasing adduction on downgaze)

IO u/a SR o/a

A

IR u/a SO o/a