

Ptosis traité par une résection du muscle de Muller : analyse d'une

série de 51 patients

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Objective: Patients with a blepharoptosis due to disinsertion of the levator aponeurosis, or to a Claude Bernard Horner syndrome, require a surgical repair. Often, the motivation is mainly esthetic. Thus, it is important to obtain a result very close to symmetry, certainly as far as the palpebral aperture is concerned, but also the symmetry of the lid crease and the lid contour.

The Muller muscle conjunctival resection, as described by Putterman, is very efficient for raising the lid. However, its use is tricky when a Hering dependence exists, or when a phenylephrine test does not provide an opening equivalent to the other eye.

51 consecutive cases who underwent a Muller's muscle-conjunctival resection by one surgeon, between October 2003 and January 2005, (64 eyelids) were retrospectively analyzed in order to refine the technique and indications by answering 4 questions :

- Is the phenylephrine test 10% reliable ?
- In case of under or overcorrection with the phenylephrine test, can surgery be graduated ?
- When a Hering dependence occurs, is it always detected by the phenylephrine test ?
- Is this technique more predictable than alternative techniques ?

Materials and Method:

Objective criteria with measurement of the palpebral aperture and the margin reflex distance, MRD (distance between the visual axis and the edge of the lid), as well as subjective criteria, much more accurate because they take into account the lid contour and the position of the lid crease, have been used with systemic photographs.

The technique used was as described by Putterman.

A good objective result corresponds to a difference of MRD inferior or equal to 1 mm

Subjective results were recorded as follows:

EXCELLENT	In the case of complete symmetry
GOOD	In the case of a small asymmetry without any cosmetic impact.
AVERAGE	When an asymmetry creates a slight disharmony of the look
BAD	When an asymmetry is obvious and needs a reoperation

These subjective criteria are more accurate than the simple analysis of the difference between the MRD. In effect, the first three subjective groups are usually considered, as a whole, a good objective result.

Results:

According to objective criteria, reduction of the ptosis with an asymmetry inferior or equal to 1mm was obtained in 90% of the cases.

The following diagrams show the subjective results :

Discussion

Is the phenylephrine test 10% reliable ?

In 55% of the cases the palpebral aperture was less than 0,5mm of the one obtained with the phenylephrine test on the operated side.
 In 21% of the cases, the position was quite unexpected ; with a gap of more than 1 mm.
 In 14% of the results, the level was inferior to the test because of a voluntarily limited resection.
 In 9% of the cases, a bilateral and symmetrical drop happened due to the relaxation of the frontalis muscle after the operation.

There were 9 overcorrections which correspond to an under evaluation by the phenylephrine test. Only 6 patients were concerned (because of 3 bilateral cases) : 1 post surgical ptosis, 3 idiopathic, ad 2 involuonnel .
 No correlation between the levator function and these overcorrections was noted.
 2 cases underwent, simultaneously, a correction of the ptosis and the blepharochalazis and no overcorrection were noticed

3 patients were under corrected and 2 of them had a ptosis over an anophthalmos socket

In case of under or overcorrection with the phenylephrine test, can surgery be graduated ?

In this study the resection was 9 mm when the objective was to reach the level of the phenylephrine test

When the response of the test was too high the resection was diminished by 1 or 2 mm and it was a success in 10 cases out of 12

When the response of the test was too low the resection was maximum with 10 mm but it worked only in 1 case out of 6 . Therefore, a resection of a part of the tarsus is necessary in case of an under correction with the phenylephrine test.

When a Hering dependence occurs, is it always detected by the phenylephrine test ?

A Hering dependence was found in 16 (46 %) out of 35 of the unilateral cases. Of these 16 cases only 9 (56 %) were predictable and revealed by the phenylephrine test. In 1 case a dependence with the test didn't occur after the procedure. Almost half of the hering dependence stay undetected after the test.



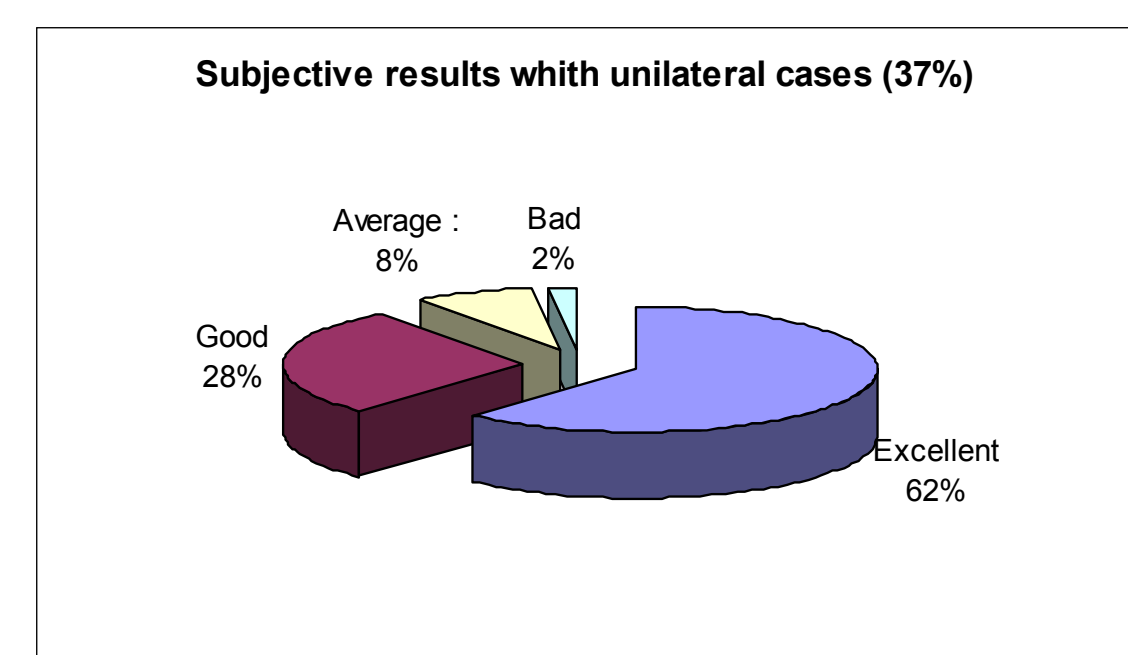
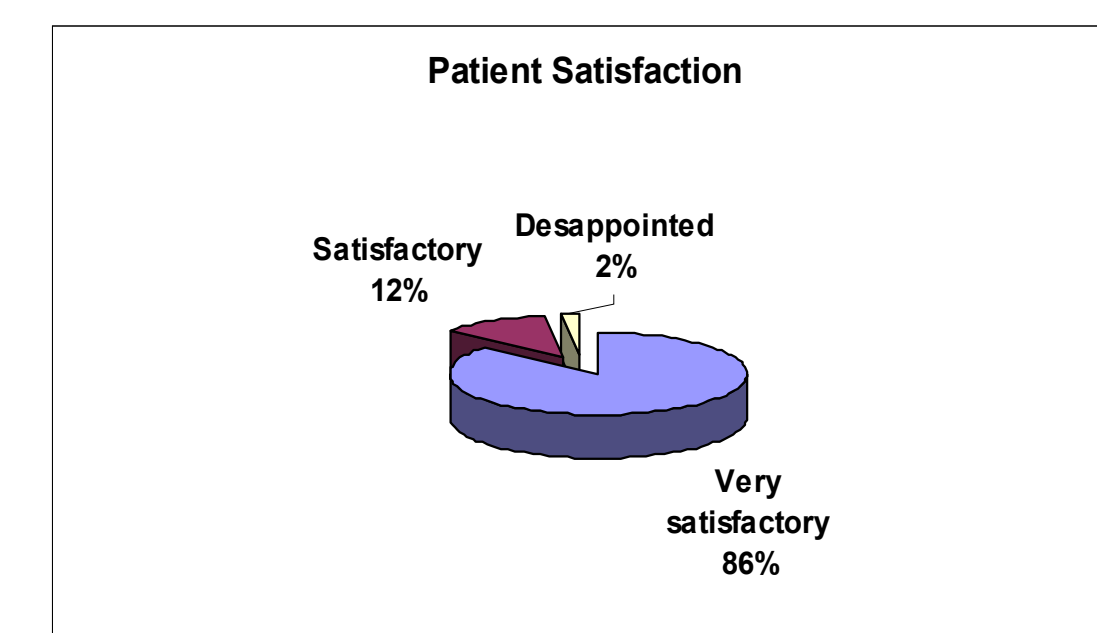
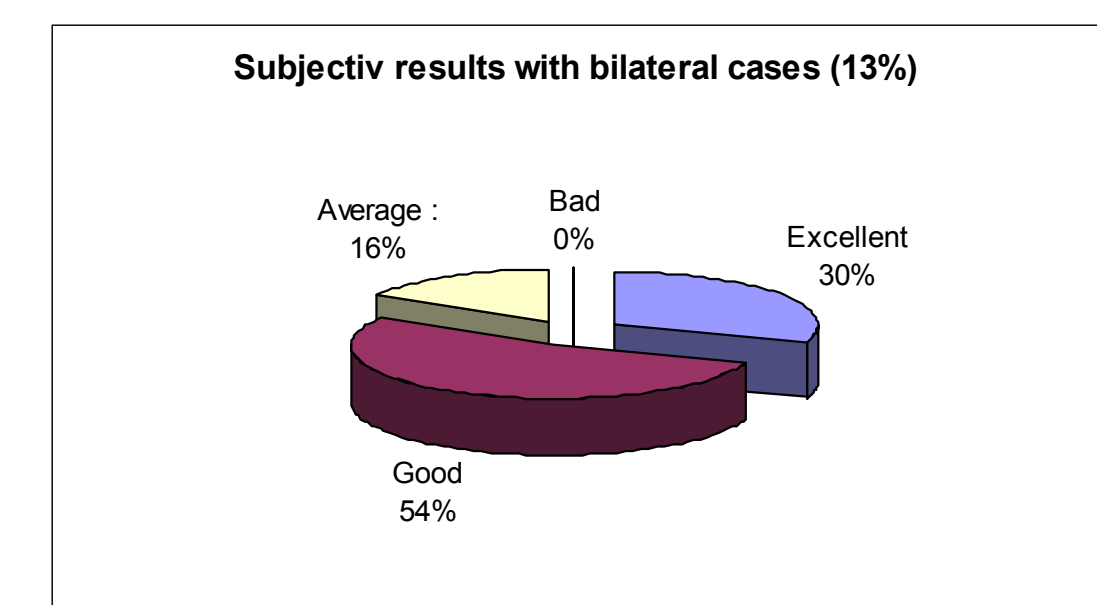
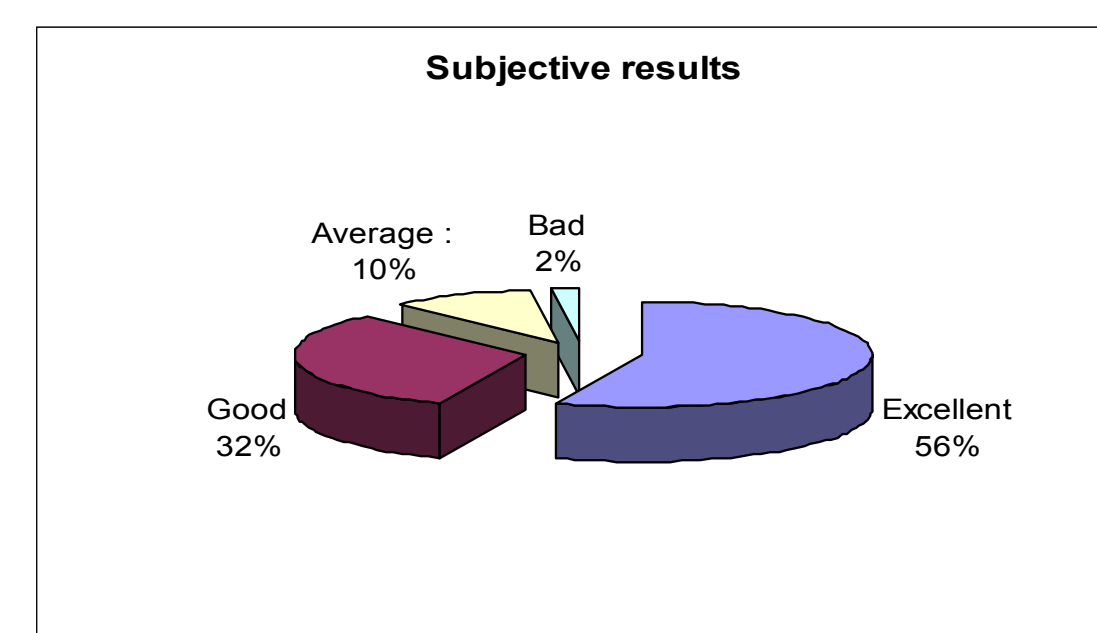
Subjective result graded : «excellent »

Subjective result graded : «Average »



Subjective result graded : «Good »

Subjective result graded : «Bad »



	Excellent	Good	Average	Bad	
Involuonnel	8	10	1	0	19
Idiopathic	2	2	0	1	5
Post contact lenses	3	2	0	0	5
CBH	1	2	0	0	3
Post ocular surgery	8	0	1	0	9
Post strab surgery	1	0	0	0	1
Post chalazion surgery	1	0	0	0	1
Post refractive surgery	1	0	0	0	1
Post orbital surgery	1	0	0	0	1
Floppy eyelid syndrome	1	1	0	0	2
Over anophthalmic socket	0	0	2	0	2
Post inflammation	0	0	1	0	1

Results with etiology

Is this technique more predictable than alternative techniques ?

3 different techniques can be used for aponeurotic ptosis and the result in the litterature (rate of success : reduction of the ptosis with an asymmetry inferior or equal to 1mm) is summarized in this diagram :

	Classical aponeurosis shortening by a cutaneous approach	Aponeurosis shortening with a mini cutaneous incision	Muller's muscleresection	Number of patients	Année
Frueh, Mc Donald	78,40%	97,60%	-	36 x 2	2004
Baroody, Harstein	-	92%	-	91	2004
Lake, Khooshabeh	-	-	92%	48	2003
Mc Cullley, Feuer	77%	-	-	828	2003
Perry, Foster	-	-	87%	68	2002
Meltzer, Flores	-	100 % ?	-	51	2001
Lemke, Lucarelli	-	89%	-	17	1999
Escalas	-	-	90%	51	2005

Conclusion:

- In 21% of the cases, the phenylephrine test was not efficient in predicting the surgical result.
- A resection of a part of the tarsus is necessary in case of an under correction with the phenylephrine test.
- Almost half of the of the cases with a Hering dependence stay undetected after the test.
- The Muller's muscle resection give better result than the classical aponeurosis shortening with an anterior cutaneous approach.