

# EVALUATION OF A NEW DEVICE IN HALLUX VALGUS (HV) SURGICAL CORRECTION

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## INTRODUCTION

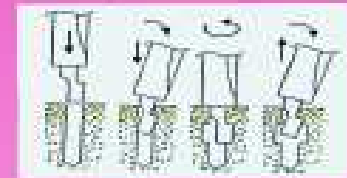
Release of the sesamoid bones is of great importance in surgical correction of Hallux Valgus. In order to prevent recurrence of Hallux Valgus, we propose a new anchoring device to keep sesamoid bones in the right place.

## MATERIALS AND METHODS

Device consists of a non resorbable thread which slides in a polyester hollow sheath. The thread forms a loop. The sheath is folded in two in a support that allows it to be introduced into the bone. When the sheath is entirely introduced into the cavity, by pulling successively the two extremities of the thread, the sheath forms an anchor, which allows for a very efficient anchorage in the bone, even when it is of bad quality.



## Preparation of the Hole



After drilling, a small cavity is made in the bone with a specific tool.

## FILOBLOC<sup>®</sup> : an anchor made out of suture thread exclusively

strong anchorage  
less invasion  
no metal  
no protrusion

**Filobloc:** Once in place, pull successively the 2 extremities of the thread, the loop forms an anchor, the diameter of which is greater than that of the drilled hole.



## CLINICAL SERIES

The clinical serie includes 24 cases (23 women, 1 man) with an average age of 56 years old.

We have more specifically studied the faculty of manipulation and efficiency of the device on metatarsal-phalangeal (MP) angle and sesamoid bone position with a 4 to 12 months follow-up.

Although clinical results were identical to those obtained in a previous personal series, the hallux valgus correction was significantly superior.

Before surgery the mean of the MP angle was 40° (+/- 1°). The sesamoid bones were not in normal position (grade I: 2; grade II: 5; grade III: 16).

At the latest follow-up the angle was 0° (+/- 1°). In 16 cases, sesamoid bones were in normal position (grade I: 5; grade II: 3; grade III: 0).

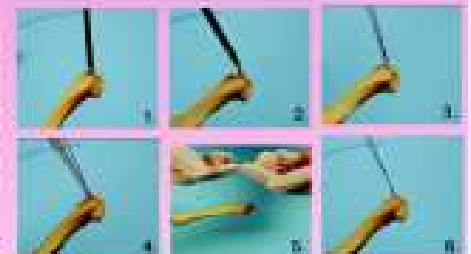
No complication due to device has been observed.



avant 1 - avant 2



après 1 - après 2



## MECHANICAL TESTING

The anchor has been studied on anatomical and synthetic materials.

15 devices have been tested on a Adamec Lhouaragy DY 54 machine.

The pull-out tests had been continued until the rupture of the thread.

FILOBLOC anchorage device has never failed.



## MECHANICAL PULLING OUT TESTING

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Table 1: PULLING OUT TESTS ON ANATOMICAL MATERIALS

Material	MP angle (°)	Maximum force (N)	Comments
1	40	1000 ± 100	MP angle 0°
2	40	1000 ± 100	MP angle 0°
3	40	1000 ± 100	MP angle 0°
4	40	1000 ± 100	MP angle 0°
5	40	1000 ± 100	MP angle 0°
6	40	1000 ± 100	MP angle 0°
7	40	1000 ± 100	MP angle 0°
8	40	1000 ± 100	MP angle 0°
9	40	1000 ± 100	MP angle 0°
10	40	1000 ± 100	MP angle 0°
11	40	1000 ± 100	MP angle 0°
12	40	1000 ± 100	MP angle 0°
13	40	1000 ± 100	MP angle 0°
14	40	1000 ± 100	MP angle 0°
15	40	1000 ± 100	MP angle 0°

Table 2: PULLING OUT TESTS ON SYNTHETIC MATERIALS

Material	MP angle (°)	Maximum force (N)	Comments
1	40	1000 ± 100	MP angle 0°
2	40	1000 ± 100	MP angle 0°
3	40	1000 ± 100	MP angle 0°
4	40	1000 ± 100	MP angle 0°
5	40	1000 ± 100	MP angle 0°
6	40	1000 ± 100	MP angle 0°
7	40	1000 ± 100	MP angle 0°
8	40	1000 ± 100	MP angle 0°
9	40	1000 ± 100	MP angle 0°
10	40	1000 ± 100	MP angle 0°
11	40	1000 ± 100	MP angle 0°
12	40	1000 ± 100	MP angle 0°
13	40	1000 ± 100	MP angle 0°
14	40	1000 ± 100	MP angle 0°
15	40	1000 ± 100	MP angle 0°

## CONCLUSION

This new device is easy to use. It is efficient in Metatarsal-Phalangeal angle correction and on sesamoid bones stabilization in Hallux Valgus surgical correction.