



Technique chirurgicale du quintus varus

Julien Lucas
France

The advertisement features a background image of a grand, ornate building at night with blue spotlights. On the left, there's a vertical column with three logos: MIFAS (with a polar bear icon), GRECMIP Morocco (with a globe icon), and SMACOT (with a star and tree icon). The main text area is a teal circle containing the following information:

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Chirurgie mini-invasive
et percutanée du pied
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Chirurgie percutanée du 5ème rayon - Techniques



Introduction

Bunionette



Quintus varus supraductus

Quintus varus infraductus



Introduction

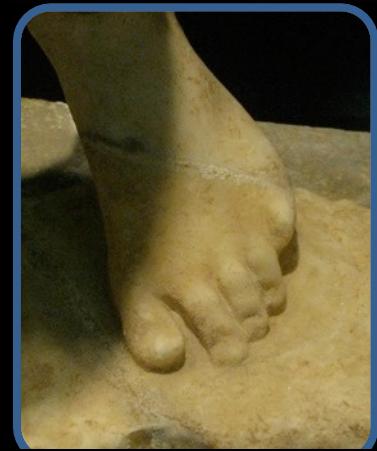
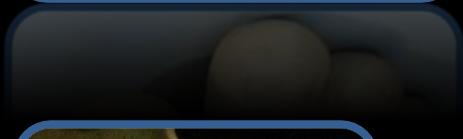


Introduction

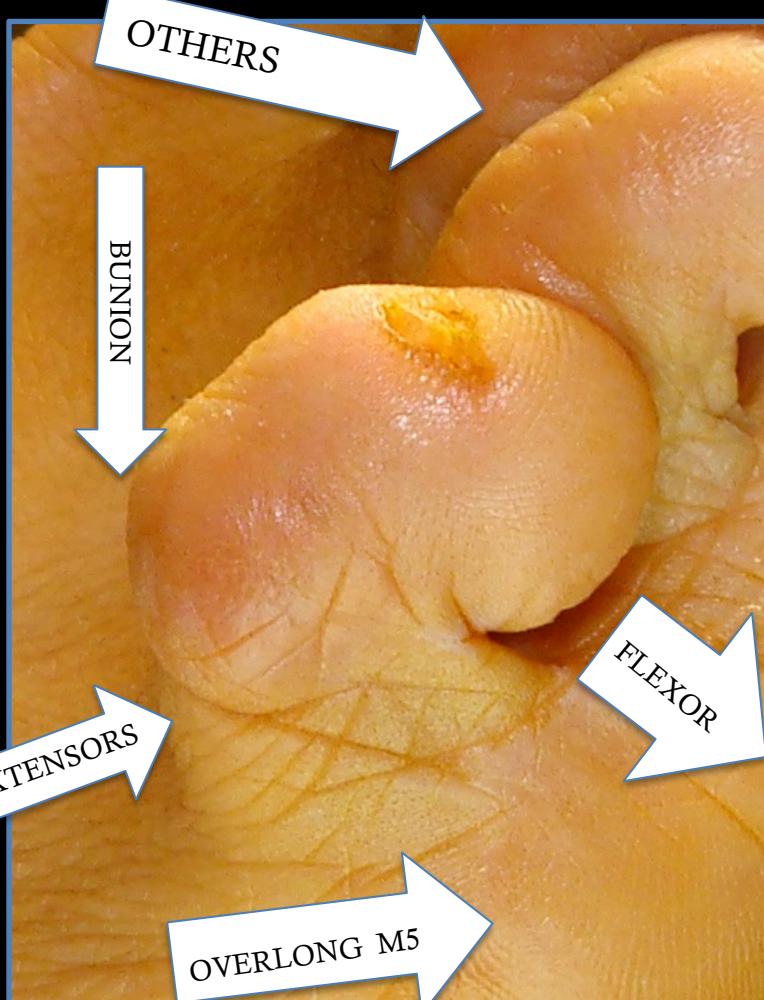


Prominence on the lateral edge of the forefoot (lateral condyle of M5 head), with or without a varus deviation of the fifth toe, which may be accompanied by a metatarsalgia under the fifth head or structural and / or positional abnormalities of the toe itself.

Introduction



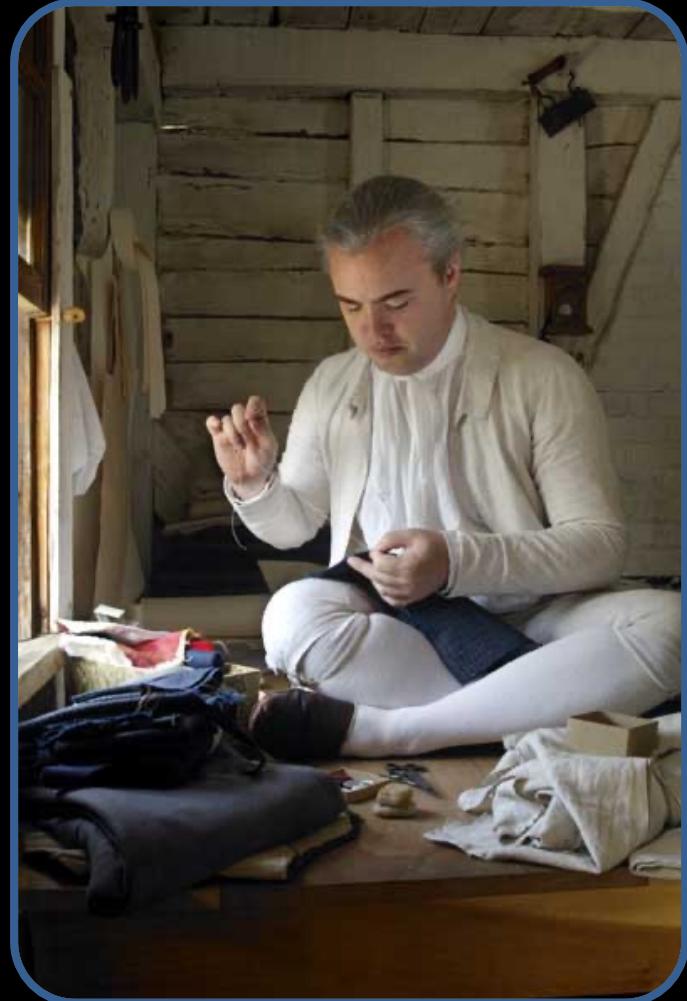
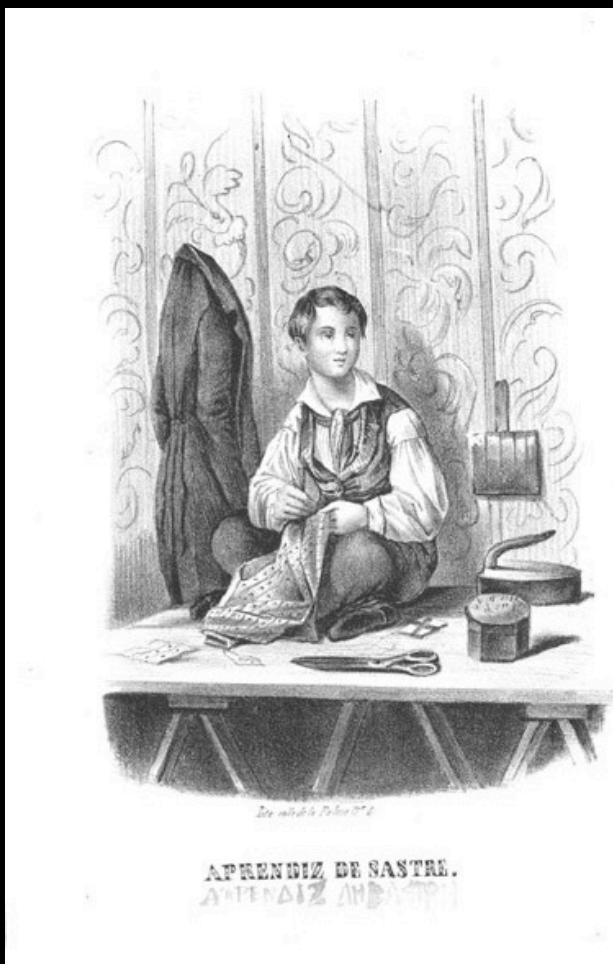
Introduction



- Frequent
- Many clinical types
- Surgical treatment « à la carte »

Introduction

Tailor's bunion (bunionette)



X-rays

Bunionette (*quintus varus*)

Type 1 16-33%



Type 2 < 10%



Type 3 57-74%



Coughlin, M.J. "Treatment of bunionette deformity with longitudinal diaphyseal osteotomy with distal soft tissue repair" Foot Ankle, 11: 195-203, 1991

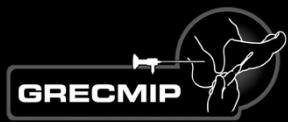
Physiopathology

Quintus varus supraductus



Physiopathology

Quintus varus infradductus



G

Physiopathology

Claw or hammer toe



Physiopathology

Wet corn



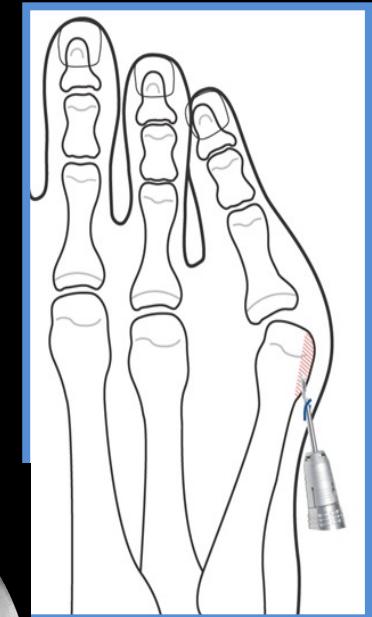
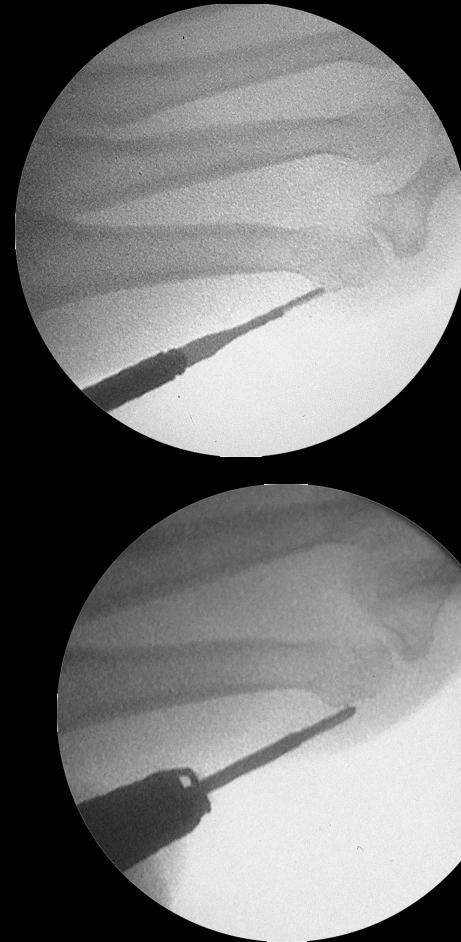
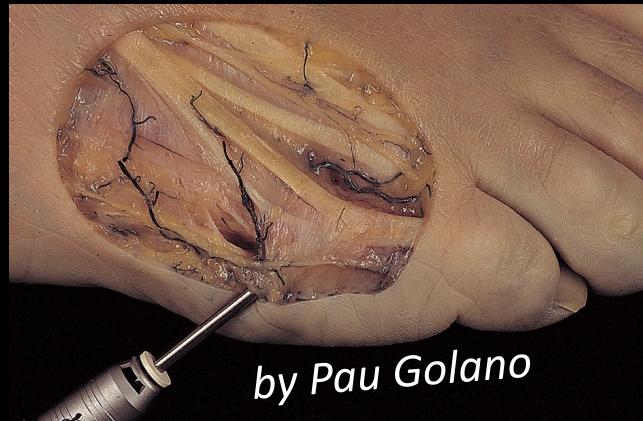
Surgical Treatment

- Bone Gestures
 - ✓ *Bunionectomies M5, P1*
 - ✓ *Osteotomies M5, P1*
- Soft-tissues Gestures
 - ✓ *Tenotomies ext., flex.*
 - ✓ *Capsulotomies*



Surgical Treatment

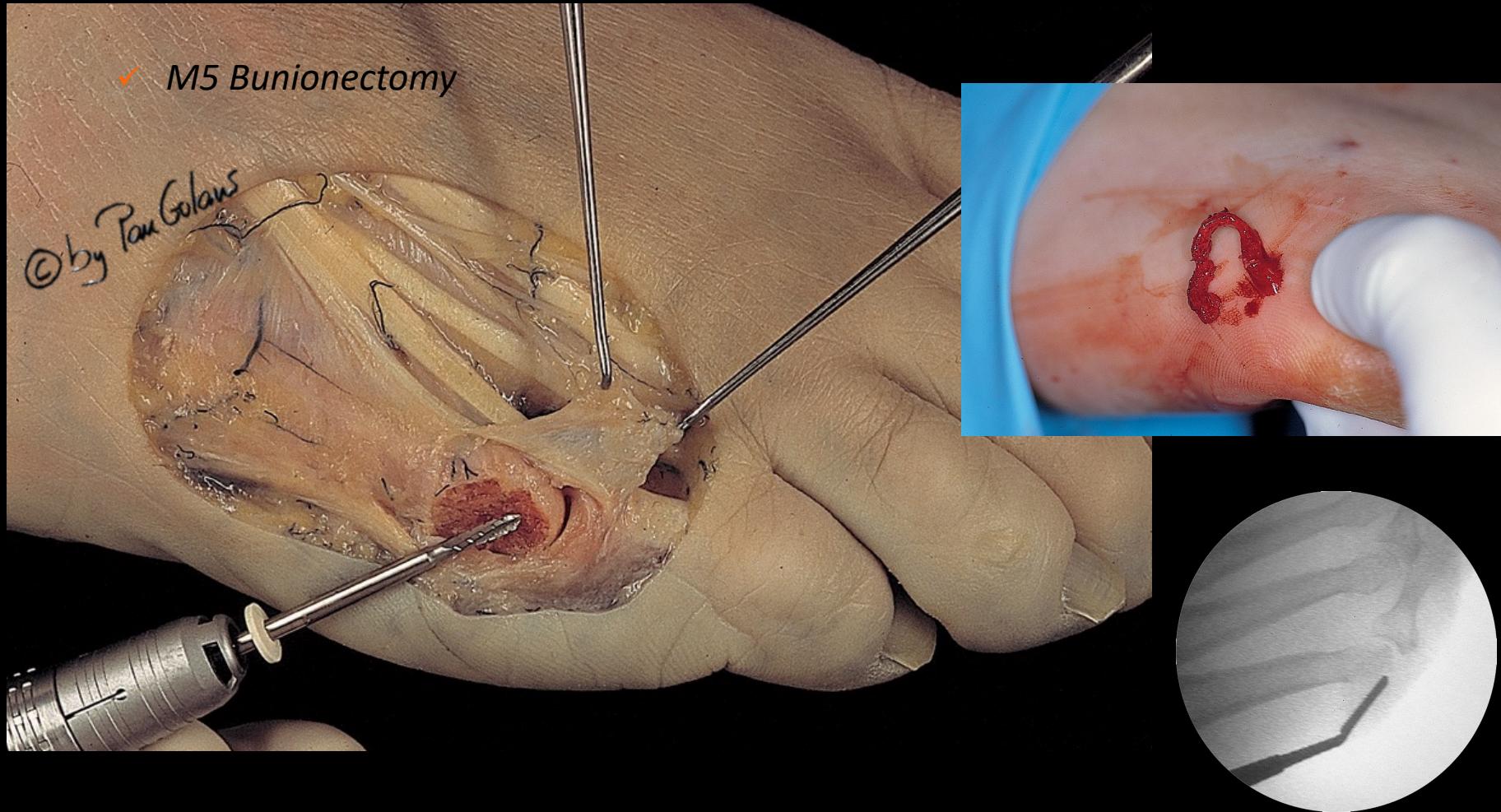
Bone gestures



Hymes, L. *Forefoot minimal incision surgery in podiatric medicine*. Futura Publishing Company, New York, 1977

Surgical Treatment

Bone gestures



Hymes, L. *Forefoot minimal incision surgery in podiatric medicine*. Futura Publishing Company, New York, 1977

Surgical Treatment

Bone gestures

✓ *P1 Bunionectomy*



Surgical Treatment

Bone gestures



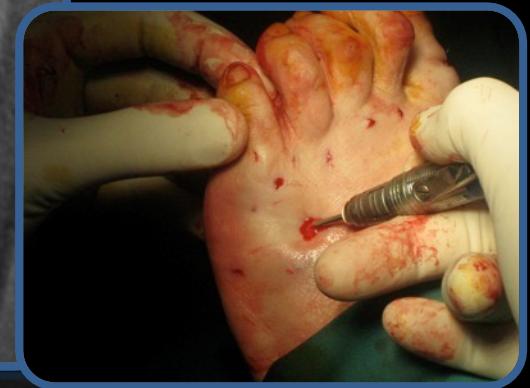
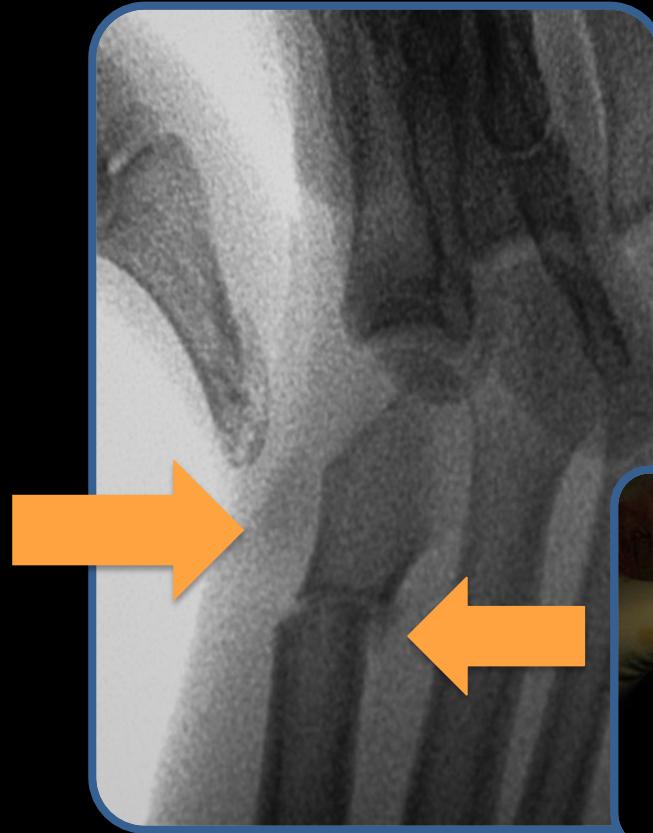
- FUNDAMENTAL gesture
- Precise level in relation with type of deformity
 - ✓ Neck
 - ✓ Distal 1/3
 - ✓ Proximal
 - ✓ Double
- Complete or preserving the lateral cortex



Surgical Treatment

Bone gestures

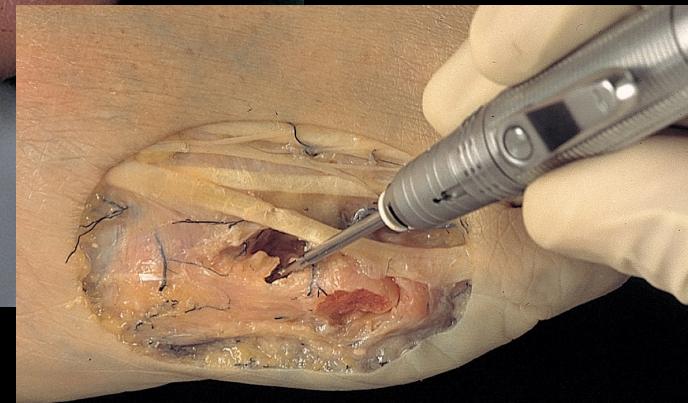
- ✓ M5 osteotomy



White, D.L. *Minimal incision approach to osteotomies of the lesser metatarsal: For treatment for intractable keratosis, metatarsalgia, and Tailor's bunion.* Clin Podiatr Med Surg, 8: 25-40, 1991

Surgical Treatment

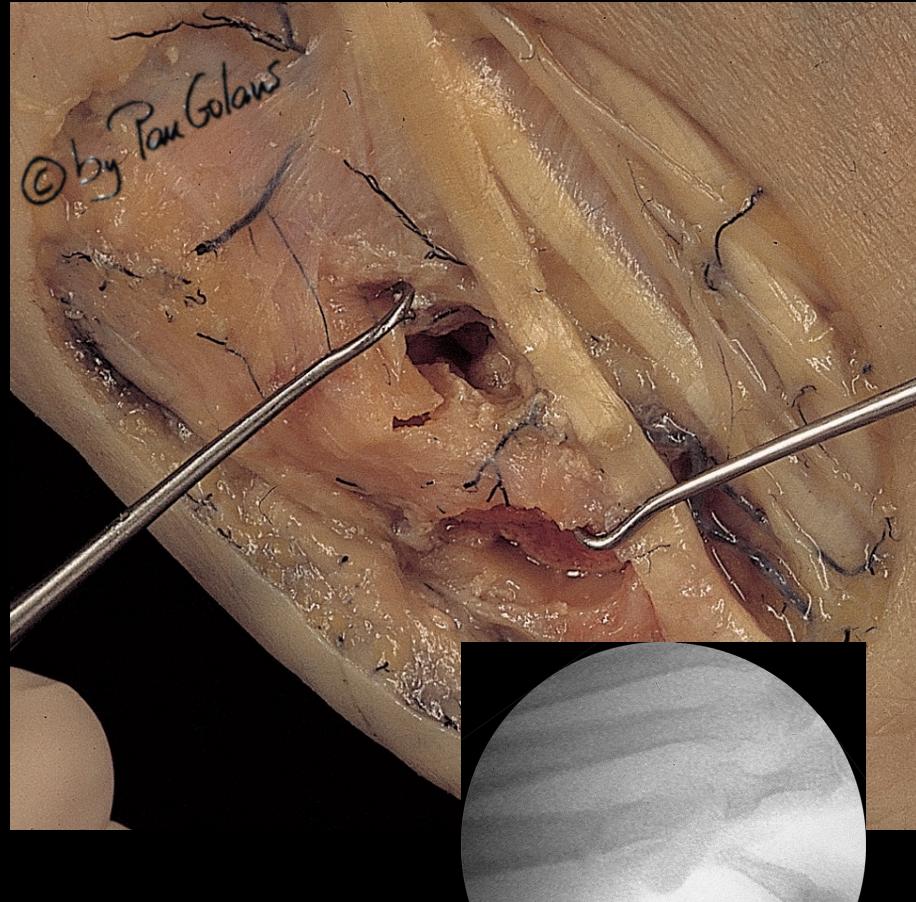
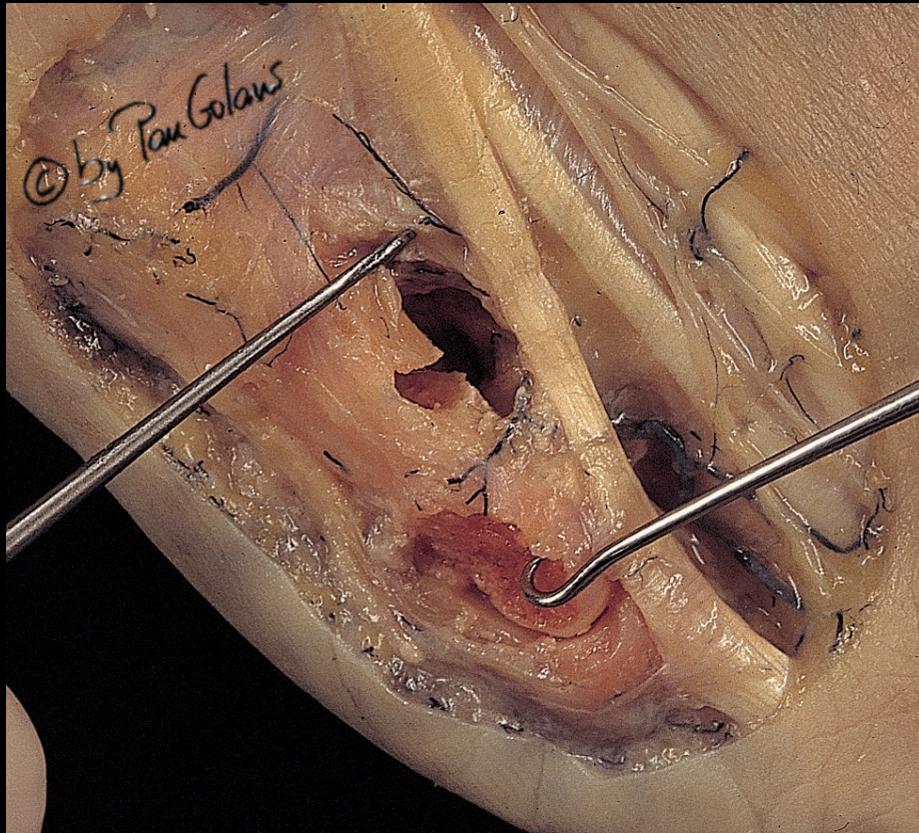
Bone gestures



Surgical Treatment

Bone gestures

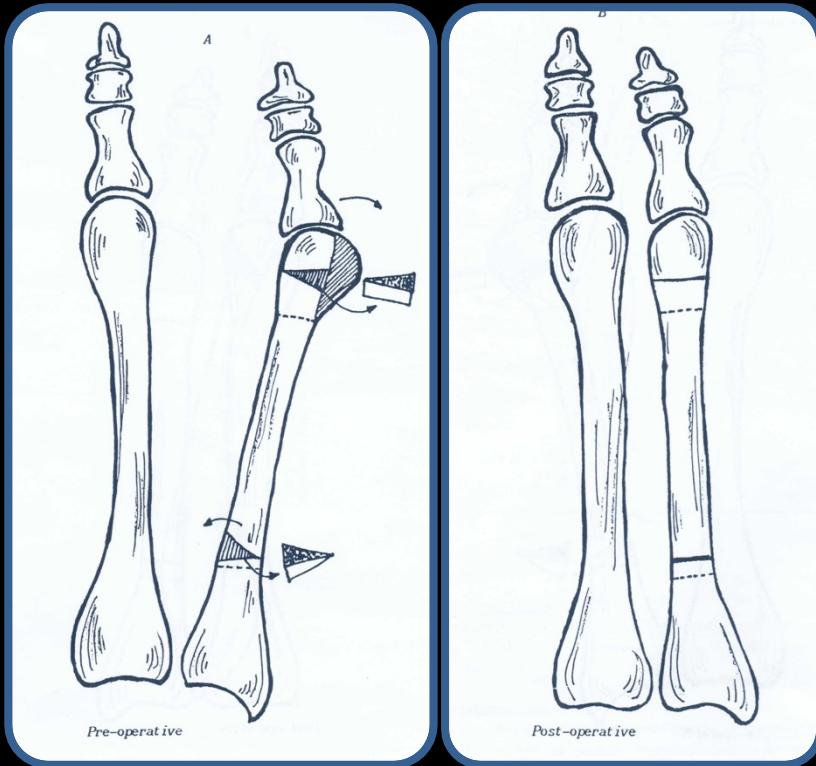
- ✓ M5 osteotomy



Surgical Treatment

Bone gestures

✓ M5 osteotomy



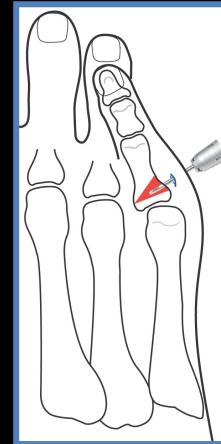
Isham, S. *The Isham Bunionette Procedure for the correction of moderate to severe Tailor's bunion deformities*. Clin Podiatr Med Surg, 1: 1-22, 1996

Surgical Treatment

✓ *P1 osteotomy*



Bone gestures



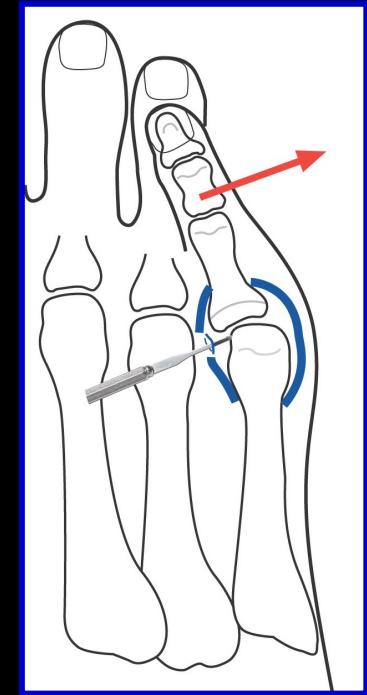
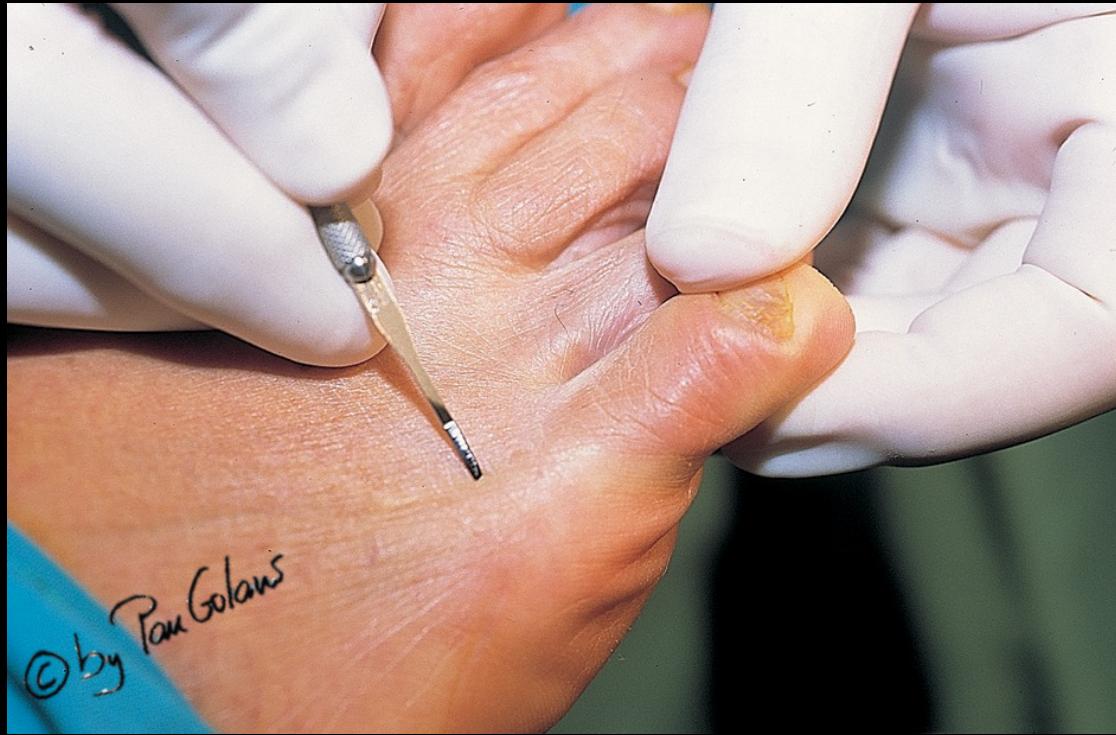
- FREQUENT
- Basal
- Optimizes the anatomical relationship between T4 & T5
- Complete or preserving the medial cortex



Surgical Treatment

Soft-tissues gestures

- ✓ *Capsulotomy*



Surgical Treatment

Soft-tissues gestures

- ✓ Extensors tenotomy



Surgical Treatment

Soft-tissues gestures

- ✓ *Longus flexor tenotomy*



Results

- The BEST percutaneous technique in forefoot surgery
 - ✓ Patients' enthusiasm
 - ✓ Published results

Contents lists available at SciVerse ScienceDirect
Foot and Ankle Surgery
journal homepage: www.elsevier.com/locate/fas

Percutaneous bunionette correction

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ABSTRACT

Background: Treatment of tailor's bunion is largely conservative. For severe or refractory cases surgical intervention is necessary. The aim of this study is to evaluate a percutaneous technique for correcting such bunionette deformities.

Methods: Twenty-one procedures were performed on 20 patients using a percutaneous technique. Patients were scored using the American Orthopaedic Foot & Ankle Society (AOFAS) Lesser Toe Metatarsophalangeal-Interphalangeal Scale.

Results: No wound healing problems, infections, non-unions or mal-unions occurred. Functional assessments revealed very good results. Radiographic evaluation confirmed good average correction of the fourth-fifth intermetatarsal angle and metatarsophalangeal angle.

Conclusions: This percutaneous technique is a reliable and effective approach for the treatment of bunionette deformity. The results obtained were comparable to those reported using traditional open techniques, but major complications due to soft tissue damage were averted. This technique can be adapted depending on the type of deformity, and does not require internal fixation.

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Traitement chirurgical percutané de la bunionette : résultats d'une étude rétrospective multicentrique de 49 cas au recul moyen de 34 mois

O. Laffenêtre, B. Millet-Barbé, V. Darcel, J. Lucas, D. Chauveaux

Introduction

La déformation dite en "bunionette" se caractérise par la proéminence latérale de la tête du cinquième métatarsien (M5) à l'origine d'un durillon au niveau du bord latéral de sa tête, ou encore planaire. Elle est trois à dix fois plus fréquente chez les femmes que chez les hommes [1]. Par analogie avec l'hallux valgus, il n'existe pas d'exostose au niveau de la tête métatarsienne : il s'agit en fait d'une migration latérale du cinquième métatarsien parfois combinée à une anomalie morphologique. M.-J. Coughlin [2] s'appuyant sur les travaux de H.-L. Du Vries [3] a distingué trois types de bunionette selon l'aspect de M5 : le type 1 caractérisé par l'augmentation de volume de la tête métatarsienne avec un condyle latéral proéminent (16-32 %), le type 2 où déformation en lame de sabre (fig. 1-a-b) entraîne une proéminence supramétatarsienne augmentée et le type 3 où l'angle entre le dr (M4) et le 5^e métatarsien est augmenté sans déformation particulière distale de M5 (37-74 %). Il peut s'y associer une malposition du cinquième orteil en supra- ou infraductus réalisant un quinzième varus infra ou supraductus, plus souvent d'origine congénitale. Le diagnostic s'appuie sur l'examen clinique de l'avant-pied, en appréciant un éventuel trouble rotatoire du cinquième orteil, confronté à l'analyse des radiographies du pied en charge. Le traitement chirurgical, proposé qu'après échec d'un traitement conservateur bien conduit, est adapté en fonction du type de déformation. L'essor de la chirurgie percutanée de l'avant-pied a permis durant ces dernières années de développer des techniques propres aux rayons latéraux et notamment au cinquième rayon tout en s'affranchissant de certaines complications relatives aux techniques chirurgicales classiques.

L'objectif principal de ce travail rétrospectif multicentrique était l'analyse des résultats fonctionnels et radiographiques d'une cohorte de 37 patients (49 pieds opérés) présentant une déformation en bunionette associée ou non à un quinzième varus infraducte, opérés entre Mai 2005 et Janvier 2012 selon une technique percutanée. Les objectifs secondaires étaient d'en évaluer la morbidité dans la comparaison avec d'autres procédures chirurgicales et situer la place de la chirurgie percutanée dans cette indication.

*O.Laffenêtre, B.Millet-Barbé, V.Darcel,
J.Lucas, D.Chauveaux. Traitement chirurgical
percutané de la bunionette : résultats d'une
étude rétrospective multicentrique de 49 cas au
recul moyen de 34 mois*
*Monographie AFCP, 9, Ed Sauramps 2013, in
press*

Results



Results



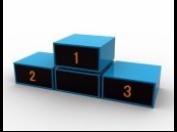
- Even in the most difficult cases
 - ✓ *No osteosynthesis*
 - ✓ *Scars near zero*

Résultats



- Even in the most difficult cases
 - ✓ *No osteosynthesis*
 - ✓ *Scars near zero*

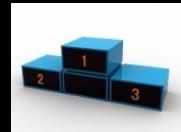
Results



- Single operator – independent reviewer with a 34 month FU (+/-22)
- 37 patients – 49 feet – 50 years (+/-19) without any patient lost to follow up
 - ✓ 40 feet CHU Bordeaux
 - ✓ 9 feet ICP Paris
- 13 patients were operated on both feet
- Associated gestures in 43%
- 100% day care procedure with LRA

| Technical gesture | Nb of patients |
|--------------------------------------|----------------|
| M5 osteotomy | 49 |
| Lateral condylectomy | 37 |
| Extensors tenotomies | 9 |
| Plantar longus flexor tenotomy | 11 |
| Selective medial arthrolysis | 38 |
| Proximal phalanx osteotomy (plantar) | 6 |
| Proximal phalanx osteotomy (dorsal) | 33 |

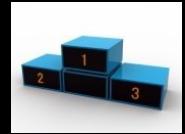
Results



| | Pre operative | Max FU |
|-----------------------|---------------|---------|
| EVA | 8 | 0,3★ |
| AOFAS scale | 58 | 97★ |
| Total ROM | 90.5° | 93.67° |
| Dorsal flexion of T5 | 67.44° | 69.69° |
| Plantar flexion of T5 | 23.06° | 23.97° |
| IMA (M4M5) | 9.98° | 5.51° ★ |
| Varus angle (M5P1) | 16.24° | 4.26° ★ |

★ Statistically significant values $p < 0,05$

Results



- Complications :
 - ✓ 1 CRPS without any sequela
 - ✓ 1 delayed healing (simulnaneous metatarsal osteotomies)
- 97% of satisfied or very satisfied patients
- 100% of correction of the pre operative deformity
- The pre operative callus always disappeared when it was present

Conclusion



- The use of the percutaneous tool is efficient and reliable.
- Excellent results without any complications
- Real assets :
 - ✓ « à la carte » surgery
 - ✓ Simple elementary gestures
 - ✓ Day care procedure
 - ✓ No or little post operative pain
 - ✓ Excellent cosmetic aspect
 - ✓ No osteosynthesis



GOLD STANDARD IN PERCUTANEOUS SURGERY