



CASE REVIEW

**i-FACTOR™ BIOLOGIC BONE GRAFT
IN FOOT AND ANKLE REVISION**



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CAUTION: i-FACTOR Flex FR is not commercially available in the USA.

i-FACTOR BIOLOGIC BONE GRAFT IN FOOT AND ANKLE REVISION

OVERVIEW

A single-centre case series of complex revision cases involving the foot and ankle are presented herein.

CASE ONE: REVISION OF FAILED LAPIDUS PROCEDURE

INTRODUCTION

60-year-old female with non-union after Lapidus procedure (no problems with the distal osteotomy). Presented with severe pain in the mid-foot and problems with weight-bearing (Figure 1).

SURGICAL PROCEDURE

The pseudoarthrosis was revised. i-FACTOR Putty (0.5 cc) was applied and fixed with a small plate (Figure 2). The patient was non-weight bearing on a walker for 5 weeks.



Figure 1. Pre-revision X-ray



Figure 2. Three-week post-op X-ray showing placement of plate

3-MONTH FOLLOW-UP

The patient was pain-free and well mobilised. Radiological imaging showed a fused Lapidus, good alignment, the sesamoid complex with good position, optimal IM-angle.



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CASE TWO: TOTAL FIRST METATARSOPHALANGEAL (MTP) ARTHROPLASTY REVISION

INTRODUCTION

55-year-old female referred from another hospital. Primary operation with a Rotaglide MTP total arthroplasty. The patient complained of pain, swelling and problems with walking (Figure 3).

FIRST OPERATION

The Rotaglide was removed and the bone prepared with drilling. A structural graft from calcaneus ('Haglund-graft') was used to restore the bone length, i-FACTOR Putty (0.5 cc) was applied and the fusion was fixed with a plate. The patient was mobilised in a post-operative shoe with full weight bearing.

7-WEEK FOLLOW-UP

7 weeks post-operatively the patient was pain-free, mobilised with full weight bearing. The fusion was clinically completely fixed and without tenderness. X-ray showed the graft integrated and the fusion close to completely healed (Figure 5).



Figure 3. Pre-revision X-ray



Figure 4. Post-op (3-week) X-ray from



Figure 5. 7-week post-op X-ray

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CASE THREE: TOTAL ANKLE ARTHROPLASTY REVISION

INTRODUCTION

A patient presented with pain 1 year after an initial revision from a total ankle arthroplasty to a fusion (structural graft and fixation with compression screws) (Figure 6).

A non-union was suspected and the compression screws were removed; however, the pain did not decrease. A CT scan confirmed the non-union (Figure 7).



Figure 6. X-ray following initial revision to a fusion using compression screws



Figure 7. CT scan showing non-union

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CASE THREE: TOTAL ANKLE ARTHROPLASTY REVISION CONT.

SURGICAL PROCEDURE

The patient was revised. During surgery i-FACTOR Putty was applied around the structural graft and the arthrodesis was fixed with tibial axis plates (Integra).

3-MONTH FOLLOW-UP

At 3-month follow-up the patient was pain-free and walking in normal shoes.

Post-operative radiological follow-ups at 3 and 9 weeks, and 3 months, show the development of the fusion (Figure 8).



Figure 8. X-ray sequence showing progressive bone union after 3 and 9 weeks, and 3 months post-op respectively

SURGEON'S VIEW

- i-FACTOR Putty is easy to apply.
- Not 'very expensive'.
- 0.5 cc volume is usually sufficient for fore-foot and mid-foot cases.
- 1.0 cc volume or larger is appropriate in hind-foot and ankle cases.
- Seems to optimise bony healing as shown in the evidence from numerous fusion studies in the spine.
- We have not, in more than 40 cases, experienced side-effects associated with i-FACTOR.

Corporate Headquarters
11025 Dover Street, Suite 1600
Westminster, CO 80021 USA

P: (303) 974-6275
F: (303) 974-6285
E: info@cerapedics.com

www.cerapedics.com

 0086 Internationally available

CAUTION: i-FACTOR Flex FR is not commercially available in the USA.

Europe, Middle East, Africa, Asia Pacific and Canada
London, England

P: +44 (7951) 944 854
F: +1 (303) 845-9381
E: emea@cerapedics.com

Asia Pacific enquiries
Sydney, Australia

E: apac@cerapedics.com

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