

## **Author's response to reviews**

**Title:** The Rotation Scarf and Akin Osteotomy for hallux valgus. A patient focussed 9 year follow up of 50 patients (73 feet).

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The Editor  
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Dear Sir,

Re: The Rotation Scarf and Akin Osteotomy for hallux valgus. A patient focussed 9 year follow up of 50 patients (73 feet).

I have carefully revised the manuscript according to the advice of the three reviewers. My response to each of the reviewers is attached below. I hope the manuscript can once again be considered for publication.

Yours sincerely,

TE Kilmartin

Response to review by Stephen Finney

Post operative has been written in full. The sentence has been reworded and no longer begins with also. Sentences beginning with numerals have been reworded.

The reference to complication in the scarf osteotomy has been removed from the abstract and introduction. Instead in the last line of the abstract background section we have emphasised the review of complications in the rotation scarf and Akin.

Corrected dates in discussion.

I have placed the relevant subheadings in the Results section.

Reference to comparing complications with the scarf have now been removed from the paper.

Comments related to introduction

The one sentence starting with also has been reworded.

Numbers now correlate with abstract

The final paragraph now refers to rotation scarf akines only and not to hallux valgus surgery in general

Comments related to patients and methods

Dates now consistent with 1996.

Patient numbers are 101.

I think the best way of demonstrating this is with a figure which has now been introduced showing all 3 measurements (Fig 2 to 4).

Last line of final paragraph changed as recommended.

Comments relating to surgical technique.

Yes, very good we are now sawing with a saw and not an osteotomy guide.

Reference to Fig. 1 now added.

Have made shoe advice consistent.

Results

The entire results section has been rewritten in line with your excellent advice. I have also changed the results section of the abstract.

Discussion

Dates of the study have been made consistent

Study subjects have been excised in favour of study group which is now used consistently throughout the paper.

Response to Alan Bryant comments.

The title has been changed as recommended.

All complications were reported, there was no incidence of DVT, non union or bone infection.

I have now included a discussion of the factors that predispose to hallux varus in

the rotation scarf akin osteotomy including the role of the Akin osteotomy.

In the limitations of the study section I have described a study whereby the validity of goniometric measurement versus xray measurement of the hallux valgus angle has been established.

As suggested the influence of adjunctive procedures on the outcomes has been discussed in the limitations of the study section.

Many thanks for your insightful review of this manuscript

Tim Kilmartin.

Response to Simon Smith review

The title has been changed as suggested.

Spelling error in abstract has been corrected

Introduction

Deletions have been made as recommended.

Reference has now been provided

Detailed description and discussion of the quality of life studies related to hallux valgus surgery will change the focus of this paper significantly and prolong the introduction when the paper is not really about these studies which were published long after the patients in this series were operated on.

3rd para capital has been removed.

3rd paragraph wording has been changed to common rather than significant complications.

Troughing has now been referred to in the second to last paragraph of the introduction with a reference to Coetzee.

Capital on scarf has been removed.

The issue of goniometric measurement versus xray measurement has now been reviewed in the discussion section and more briefly in the methods section. The first line of the last paragraph of the introduction has now been re-written to be more specific, reference to attempting to review 101 patients has been deleted in favour of the reviewers suggestion.

Patients and methods

And has been placed between Scarf and Akin.

The details of the xray technique have now been given. A discussion of goniometric measurement for post op evaluation is now given in the limitations of the study section in the discussion which we hope answers the issues raised

here. In particular we have described a study of goniometric measurement versus xray measurement.

The hallux valgus angle can only be a hallux valgus angle when it is in excess of 15 degrees. When it is less it is the first MTP joint angle. However in an attempt to clarify we have referred to first MTP joint/ hallux valgus angle

The methods for goniometric measurement are now provided as figures.

Sentence structure changes as recommended.

The impact of the adjunctive procedures has now been discussed in limitations of the study section of the discussion.

The ROM and flexion exercises have now been described at the end of the surgical technique section and figures used to illustrate

The rotation of the fragment has now been described in the surgical technique section.

We have added when we expected the patients to return to work

## Results

All SD have now been put in brackets

AVN is a very rare but significant complication with very marked clinical symptoms, it is not however a clinical diagnosis but one that requires diagnostic imaging. The suggestion that it could be a cause of stiffness in isolation is one that we would be reluctant to include in this paper especially as in the late stages the resorption of the first metatarsal head shortens the first metatarsal and can lead to an increase in the range of first MTP joint movement.

The results section has been re-written and the layout changed to improve readability.

With such a large loss to follow up which is inevitable in such a long follow up it is important to try and establish what could have happened to the patients particularly if a large number would not return because they had been operated on elsewhere, we therefore think it important to provide as much follow up details as possible.

## Discussion

First line of the discussion has been rewritten to clarify as requested.

Page 8. If we exchanged fixed for focussed there would be two focussed in the one sentence.

We have attempted to rationalise the importance of hallux flexor power which may we believe have a bearing on metatarsalgia. It is made clear that this is our unproven belief.

We have clarified the plantar displacement of the metatarsal head.

The unhappiness of the patients with hallux varus has been clarified as suggested.

The technique of metalwork removal has been taken out and we have removed the line about incidence of removal.

Severe hallux valgus is now referenced to Coughlin.

Fusions are prone to displacement if walked on early as weightbearing forces will pull apart forefoot fusion sites. This is not the case for the rotation scarf.

Avascular necrosis has been removed from point ii.

The limitations of the study section has been enhanced as recommended.

The high heels sentence has been rewritten and clarified.

The sentence on hallux valgus recurrence has been rewritten as suggested.

Thank you very much for your review which has greatly enhanced this paper.