

Additional file 2

Data extraction table

Study	Design	Number of participants (N), number of ulcers	Age (years)*, male %, duration of diabetes (years)†, duration of ulcer (months)‡	Location of ulcer	Details of intervention and control groups	Outcome results§	Complications and adverse events	Follow-up (months)¶	Comments
Allam, 2006 [21]	Randomised-controlled trial	<i>Intervention group</i> N = 15 <i>Control group</i> N = 14	<i>Age</i> 55.0 ± 11.0 <i>Duration of diabetes</i> 20.0 ± 11.0 <i>Duration of ulcer</i> Median = 42.0 (range 10-72)	Forefoot	<i>Intervention group</i> GR (Tongue in groove) or ATL (Percutaneous triple hemi-section) <i>Control group</i> TCC	<i>Intervention group</i> 1) Time to healing of ulcer Median 30 days (range 21-221 days) 2) Rate of ulcers healed 15/15 (100%) 3) Rate of ulcer recurrence 3/15 (20.0%) <i>Control group</i> 1) Time to healing of ulcer Median 49 days (range 32-230 days) 2) Rate of ulcers healed 14/14 (100%) 3) Rate of ulcer recurrence 8/14 (57.1%)	<i>Intervention group</i> 3 wound haematomas (20.0%) 2 ruptured Achilles tendons (13.3%) 2 calcaneal gait (13.3%) 3 late heel ulcers (20.0%) <i>Control group</i> 1 calcaneal gait (7.1%)	Mean = 24.0	Data for time to healing of ulcer is for 6 month follow-up
Batista <i>et al.</i> , 2011 [26]	Prospective case series	N = 52	<i>Age</i> Mean = 66.4 <i>Duration of diabetes</i> > 5 years (100% participants)	Forefoot	ATL (Modified White with three hemi-sections) + TCC	1) Rate of ulcer recurrence 4/52 (7.7%)	None reported	Mean = 24.0	

Colen <i>et al.</i> , 2013 [27]	Retrospective cohort	<p><i>Intervention group</i> N = 138 145 ulcers</p> <p><i>Control group</i> N = 149 179 ulcers</p>	<p>Age 58.5 ± 10.0</p> <p>Male % = 59</p>	Forefoot/ Midfoot	<p><i>Intervention group</i> ATL (2-stab method or open Z-plasty) + surgical soft tissue reconstruction ± tarsal tunnel release</p> <p><i>Control group</i> Surgical soft tissue reconstruction ± tarsal tunnel release</p>	<p><i>Intervention group</i></p> <p>1) Rate of ulcer recurrence (requiring reoperation) 3/145 (2.1%)</p> <p>2) Rate of transfer ulcers 6/138 (4.3%)</p> <p><i>Control group</i></p> <p>1) Rate of ulcer recurrence (requiring reoperation) 45/179 (25.1%)</p> <p>2) Rate of transfer ulcers 21/149 (14.1%)</p>	<p><i>Intervention group</i> 10 suture line dehiscence (7.2%) 17 small plantar wounds delaying weight-bearing ambulation >28 days (12.3%) 2 heel transfer ulcers (1.4%)</p> <p><i>Control group</i> 13 suture line dehiscence (9.4%) 18 small plantar wounds delaying weight-bearing ambulation >28 days (12.1%)</p>	35.3 ± 11.0	Surgical soft tissue reconstruction refers to wound closure surgery including management of bony prominences and debridement
Dayer & Assal, 2009 [28]	Prospective cohort	N = 24	<p>Age 56.3 ± 12.4</p> <p>Male % = 42</p> <p>Duration of ulcer 15.9 ± 7.6</p>	Forefoot	GR (Strayer) + Jones extensor hallucis longus transfer and flexor hallucis longus transfer ± peroneus longus to peroneus brevis transfer	<p>1) Time to healing of ulcer 31.3 ± 12.2 days</p> <p>2) Rate of ulcers healed 21/22 (95.5%)</p> <p>3) Rate of ulcer recurrence 0/21 (0%)</p> <p>4) Rate of transfer ulcers 1/22 (4.5%)</p>	1 death from myocardial infarction (4.2%)	39.2 ± 12.2	Data only presented for subjects who received GR
Hamilton <i>et al.</i> , 2005 [29]	Retrospective case series	N = 7	Age 51.3 ± 10.9	Forefoot	GR + peroneus longus to brevis transfer + resection of the 2 nd through 5 th metatarsal heads + TCC	<p>1) Time to healing of ulcer 42.6 days (range 28-102 days)</p> <p>2) Rate of ulcers healed 7/7 (100%)</p> <p>3) Rate of ulcer recurrence 0/7 (0%)</p> <p>4) Rate of transfer ulcers 0/7 (0%)</p>	<p>1 dehiscence at site of gastrocnemius incision (14.3%) 1 sinus from antibiotic bead placed in forefoot to treat osteomyelitis (14.3%)</p>	17.1 ± 7.3	<p>Data only presented for subjects with diabetes</p> <p>Data for time to healing of ulcer includes non-diabetic subjects (data for this outcome not separated in study)</p>

Kim <i>et al.</i> , 2012 [22]	Prospective case series	N = 60 64 ulcers	Age 54.1 ± 14.3 Male % = 62 Duration of diabetes > 10 years (70% participants) Duration of ulcer 5.5 ± 3.6	Forefoot	Selective plantar fascia release	1) Rate of ulcers healed 36/64 (56.3%) 2) Rate of ulcer recurrence 0/36 (0%)	None reported	Mean = 23.5	
Laborde, 2005 [30]	Prospective case series	N = 17 20 ulcers	Age 58.7 ± 12.3 Male % = 53 Duration of ulcer 12.9 ± 19.3	Forefoot	GR (Vulpius) + toe tenotomy for ulcers on the 1 st toe + peroneus longus lengthening (z-type) for 1st metatarsal ulcers + posterior tibial lengthening (intramuscular) for 5 th metatarsal & cuboid ulcers	1) Rate of ulcers healed 19/20 (95.0%) 2) Rate of ulcer recurrence 3/19 (15.8%) 3) Rate of transfer ulcers 2/17 (11.8%)	1 death (5.9%) 1 pulmonary embolism (5.9%) 1 gangrene with below knee amputation (5.9%) 1 gangrene with above knee amputation (5.9%) 1 heel transfer ulcer (5.9%)	34.6 ± 19.3	Data only presented for subjects with diabetes who received GR
Laborde, 2009 [31]	Retrospective case series	N = 10 10 ulcers	Age 60.1 ± 15.1 Male % = 60 Duration of ulcer 16.2 ± 21.7	Midfoot	GR (Vulpius)	1) Rate of ulcers healed 8/9 (88.9%) 2) Rate of ulcer recurrence 1/8 (12.5%) 3) Rate of transfer ulcers 0/9 (0%)	2 deaths (20.0%) 1 gangrene with trans-femoral amputation (10.0%)	35.2 ± 18.5	Data only presented for subjects with diabetes
La Fontaine <i>et al.</i> , 2008 [32]	Retrospective case series	N = 28	Age Median = 51.0 (range 24-72) Male % = 71	Forefoot/ Midfoot	ATL (Hoke)	1) Time to healing of ulcer 65.8 days (range 21-504 days) 2) Rate of ulcers healed 24/28 (85.7%) 3) Rate of ulcer recurrence 10/24 (41.7%) 4) Rate of transfer ulcers 6/28 (21.4%)	5 heel transfer ulcers (17.9%)	Mean = 28.8	

Lin <i>et al.</i> , 1996 [33]	Retrospective cohort	<i>Intervention group</i> N = 15 <i>Control group</i> N = 21	<i>Intervention group</i> Age 45.8 ± 16.3 <i>Male %</i> = 73 <i>Duration of diabetes</i> 10.0 ± 4.4 <i>Duration of ulcer</i> 11.5 ± 3.7 <i>Control group</i> Age 50.7 ± 11.8 <i>Male %</i> = 48 <i>Duration of diabetes</i> 11.7 ± 5.3 <i>Duration of ulcer</i> 6.5 ± 3.1	Forefoot	<i>Intervention group</i> ATL (Hoke) + TCC <i>Control group</i> TCC	<i>Intervention group</i> 1) Time to healing of ulcer 39.3 days (range 21-90 days) 2) Rate of ulcers healed 14/15 (93.3%) 3) Rate of ulcer recurrence 0/14 (0%) <i>Control group</i> 1) Time to healing of ulcer 43.5 days (range 25-62 days) 2) Rate of ulcers healed 21/21 (100%) 3) Rate of ulcer recurrence 4/21 (19.0%)	<i>Intervention group</i> 1 infection at the 1 st metatarsal head (12 weeks after ATL procedure) with partial foot amputation (6.7%) <i>Control group</i> None reported	<i>Intervention group</i> Mean = 17.3 (range 11-26) <i>Control group</i> Mean = 12.8 (range 8-23)	Time to healing for intervention group was calculated 3 weeks post ATL (from the time of reinitiating the TCC protocol)
-------------------------------	----------------------	---	--	----------	--	---	---	--	---

Mueller <i>et al.</i> , 2003 [15]	Randomised-controlled trial	<i>Intervention group</i> N = 31 <i>Control group</i> N = 33	Age 56.0 ± 10.0 Male % = 77 Duration of diabetes 18.4 ± 11.7	Forefoot	<i>Intervention group</i> ATL (Hoke) + TCC <i>Control group</i> TCC	<i>Intervention group</i> 1) Time to healing of ulcer 57.5 ± 47.0 days 2) Rate of ulcers healed 30/30 (100%) 3) Rate of ulcer recurrence 10/26 (38.5%) <i>Control group</i> 1) Time to healing of ulcer 40.8 ± 28.1 days 2) Rate of ulcers healed 29/33 (87.9%) 3) Rate of ulcer recurrence 21/26 (80.8%)	<i>Intervention group</i> 3 deaths (1 from MI during treatment phase) (9.7%) 4 heel transfer ulcers (12.9%) 4 abrasions from the TCC (12.9%) 1 deep infection requiring debridement and antibiotic therapy (3.2%) 2 falls in the TCC (6.5%) <i>Control group</i> 3 deaths (9.1%) 1 toe amputation (3.0%) 6 abrasions from the TCC (18.2%) 3 intolerant to cast and immobilized with removable pressure relief boot (9.1%)	25.2 ± 8.4 (range 15.6-46.8)	Average follow-up time was measured from initial healing of ulcer
-----------------------------------	-----------------------------	---	--	----------	--	--	---	------------------------------	---

* Unless shown otherwise, age given as mean ± standard deviation

† Unless shown otherwise, duration of diabetes given as mean ± standard deviation

‡ Unless shown otherwise, duration of ulcer given as mean ± standard deviation

§Subjects available for follow-up

¶Unless shown otherwise, follow-up given as mean± standard deviation

Abbreviations: GR, gastrocnemius recession; ATL, Achilles tendon lengthening; TCC, total contact cast.