Norfolk and Norwich University Hospitals NHS
NHS Foundation Trust

Nature or Nurture

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Mother

Aged 70

Type 2 diabetes 2000

Father

Aged 72

Type 2 diabetes 1985

Daughter

Aged 47

Type 2 diabetes 1999

Son

Aged 42

Type 1 diabetes 1984

Father

Medical History

- Male aged 72
- 1985 diagnosed with type 2 diabetes started on insulin almost immediately
- Tractor drive
- Previously heavy smoker
- 2009 HbA1c 8.2% 66(mmol/mol)
- 2000/2003 CVA
- Ischaemic heart disease
- Chronic inflammatory demyelinating polyneuropathy
- Chronic obstructive pulmonary disease
- Retinopathy & nephropathy

Foot History

- No foot pulses palpable
- Densely neuropathic
- 1995 first known foot problem
- Repeated problems which healed conservatively
- March 2003 developed left heel ulceration underwent L/BKA
- Developed right heel ulceration during hospital admission
- Right ABPI 0.71
- August 2003 underwent R/BKA

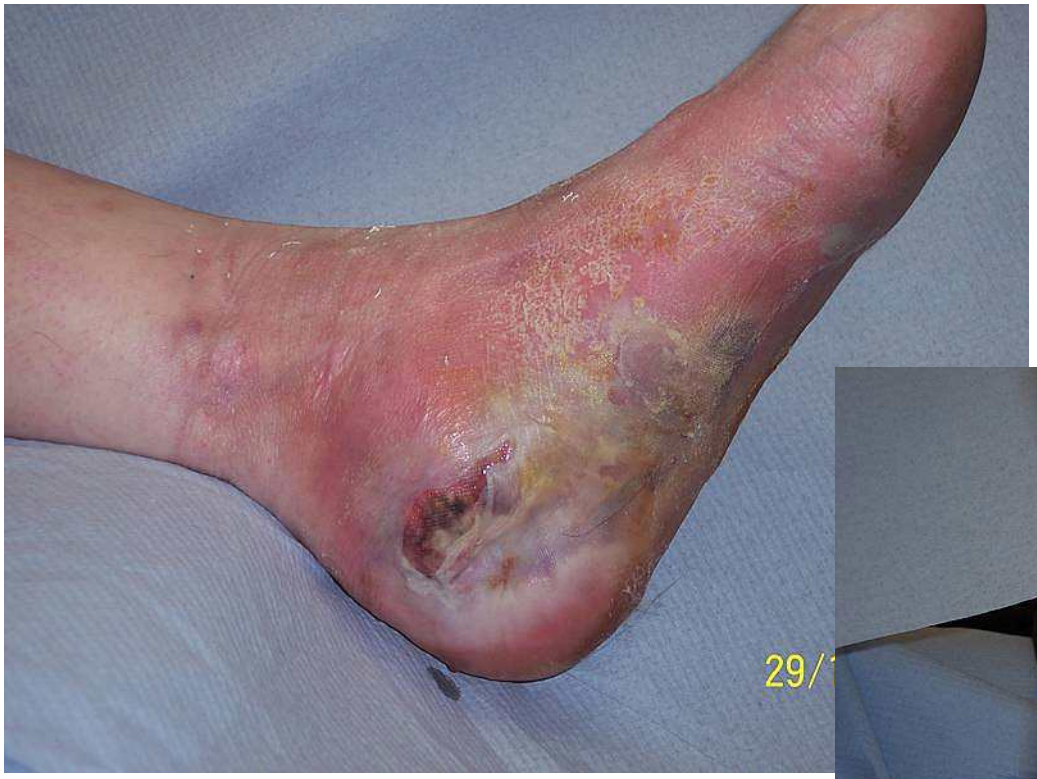
Son

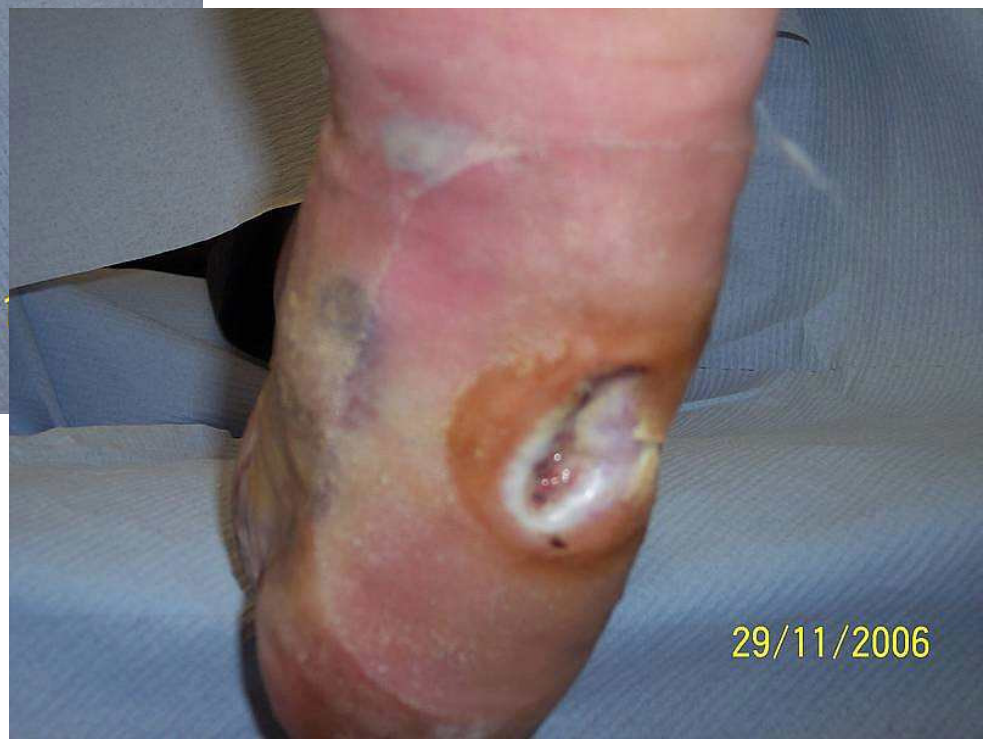
Medical History

- Male aged 42
- 1984 diagnosed with type 1 diabetes
- Repeated admissions for DKA as a result of binge drinking
- Several episodes when he was detained in HMP
- Smoker 40 day
- 2009 HbA1c 11.4% 101(mmol/mol)
- Retinopathy & Nephropathy
- Non compliant with medication and appointments
- 2007 severe RTA
- 2010 R/CVA

Foot History

- Foot pulses palpable
- Neuropathic
- 2000 amputation R/1st
- 2003 amputation L/5th ray
- Developed ulceration L/5th styloid process
- Non compliant
- Refused off-loading
- Infrequent clinic attendee
- November 2006 dropped into reception and asked if one of the podiatrist would look at his foot

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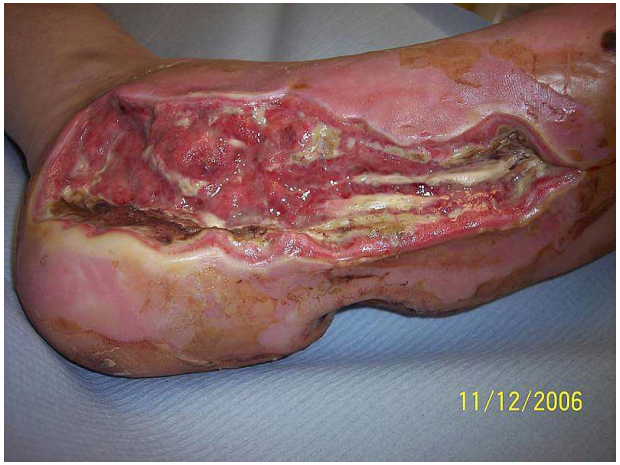
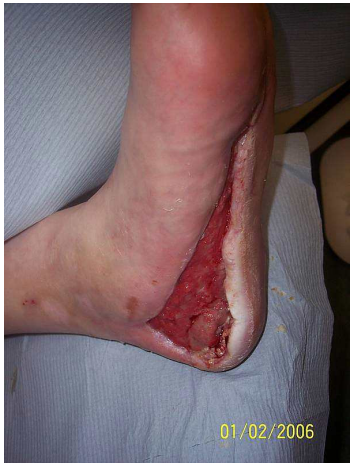
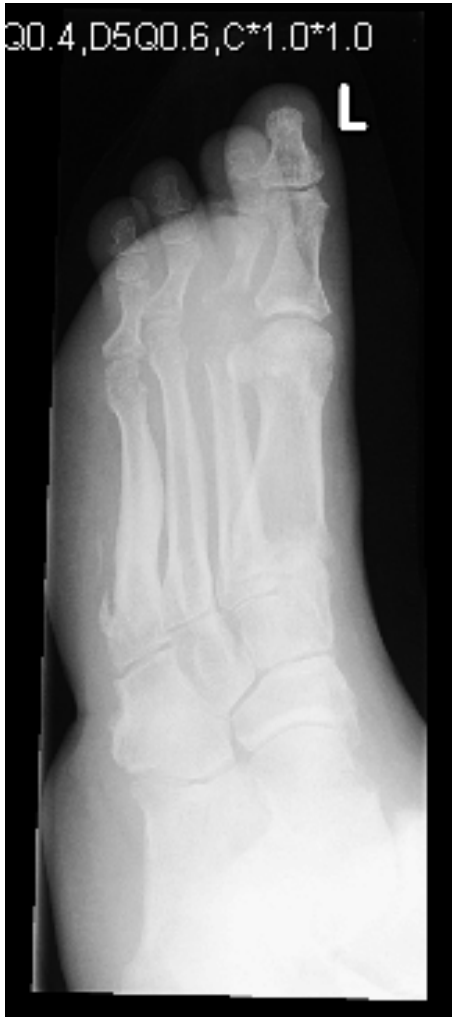
- Immediate admission
- Underwent extensive surgical debridement
- Treated with larvae therapy and VAC whilst inpatient
- Reviewed by plastic to discuss skin grafting
- Continued outpatient follow-up in foot clinic
- Foot healing well
- Patient was attending clinic regularly



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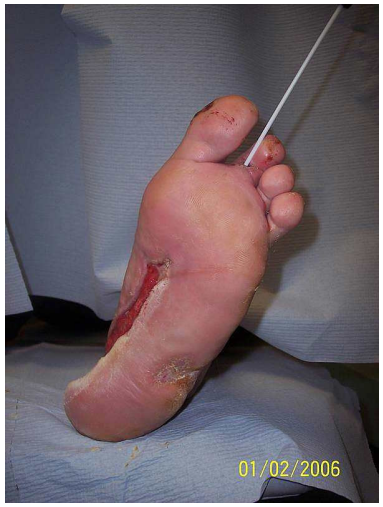
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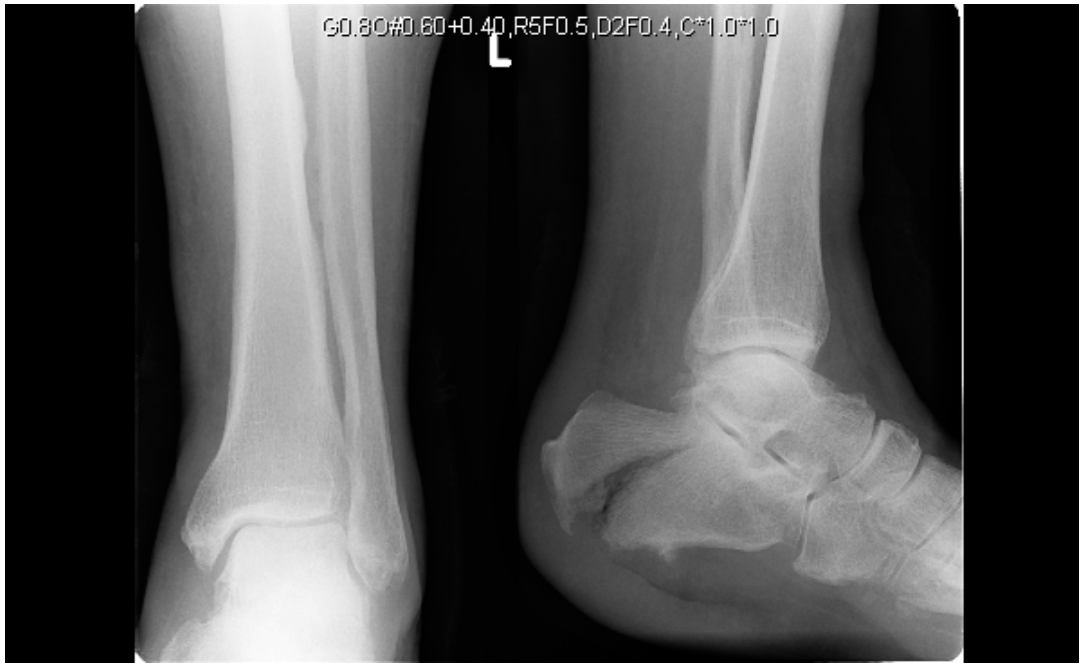
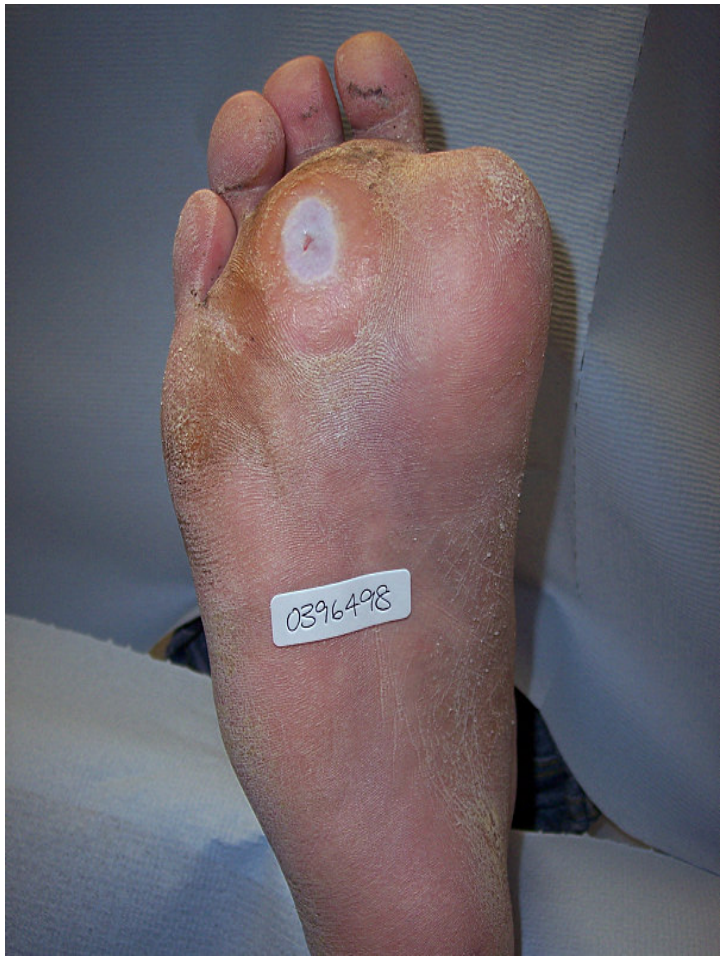

G0.8O#0.60+0.40,R5F0.5,D2F0.4,C*1.0*1.0
L

- 2007 underwent a L/BKA
- Fitted with prosthesis and mobilising well
- 2008 developed an ulceration to the other foot in this was caused in part by a poorly fitting prosthesis resulting in a strange gait which was causing overloading on the R/Foot
- This healed quickly once the prosthesis had been altered
- Discharged to our outreach clinic for ongoing podiatry care



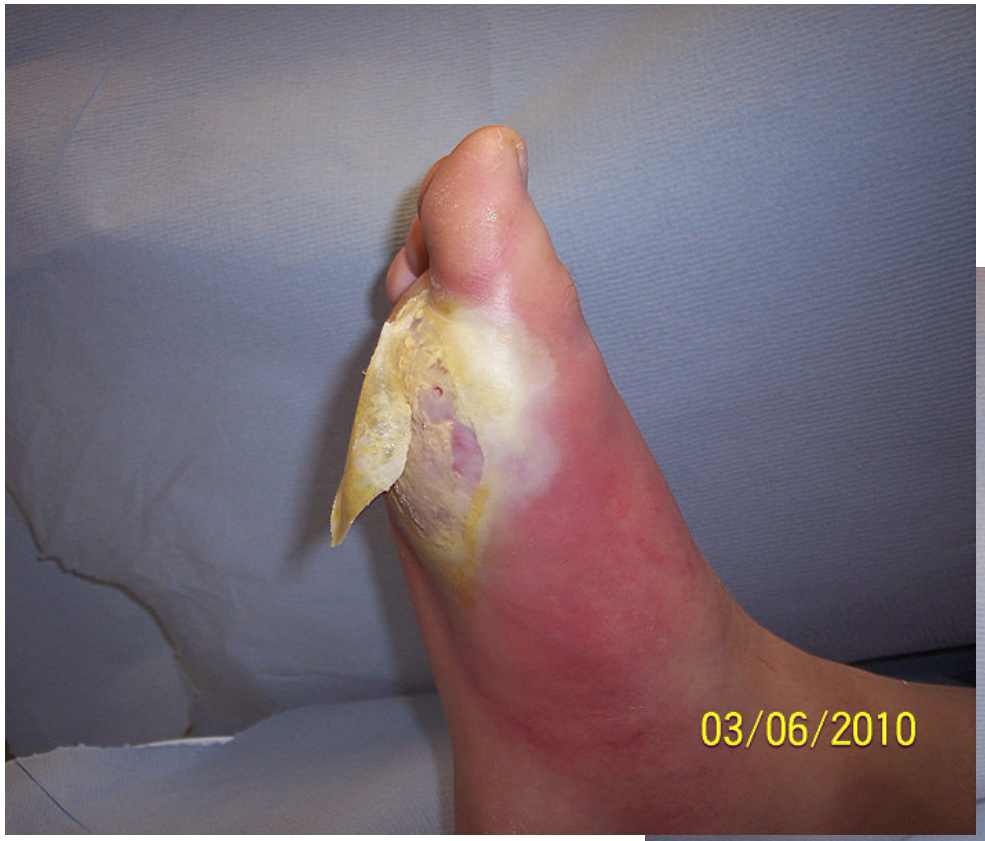
Daughter

Medical History

- Female aged 47
- 1999 diagnosed with type 2 diabetes
- 2005 commenced insulin
- Non smoker
- Depression
- HbA1c 10% 86(mmol/mol)

Foot History

- Foot pulses palpable
- Neuropathic
- 2007 first referred to foot clinic
- History multiple foot ulcerations
- June 2010 referred from cellulitis clinic to diabetic foot clinic
- She had trod on some grit while out walking several days ago
- Attended primary care drop in clinic and A&E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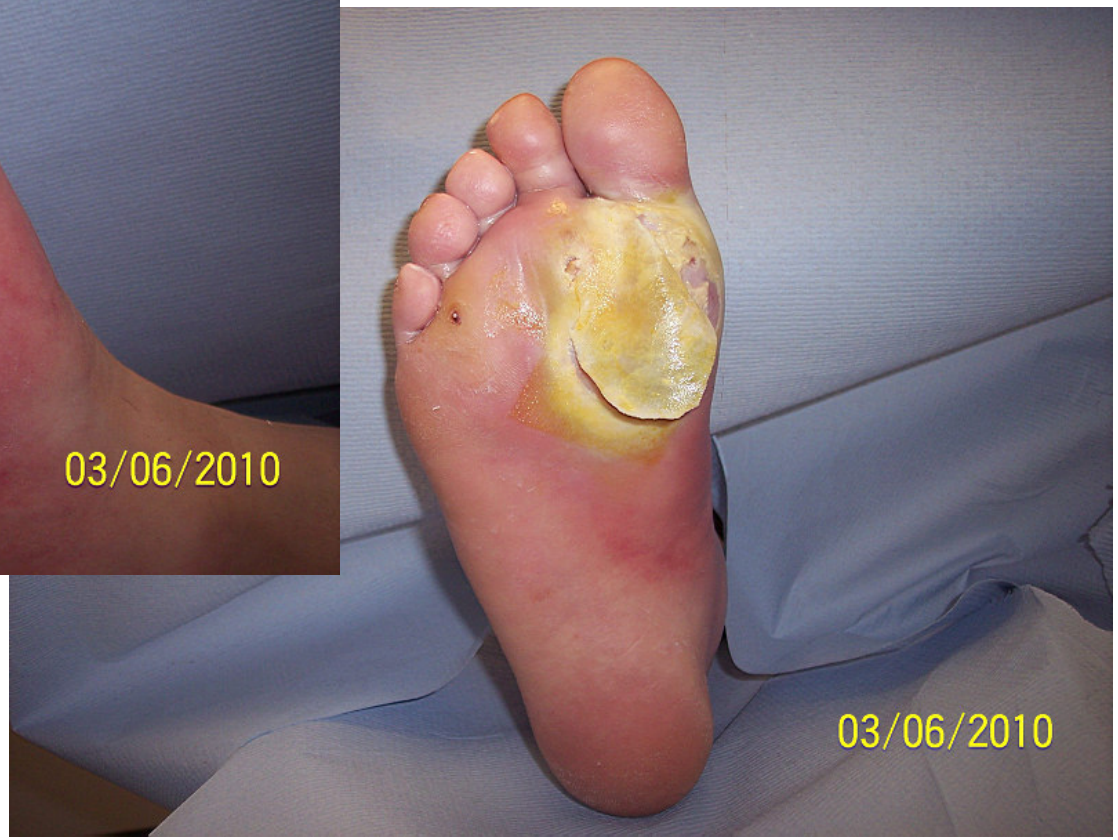
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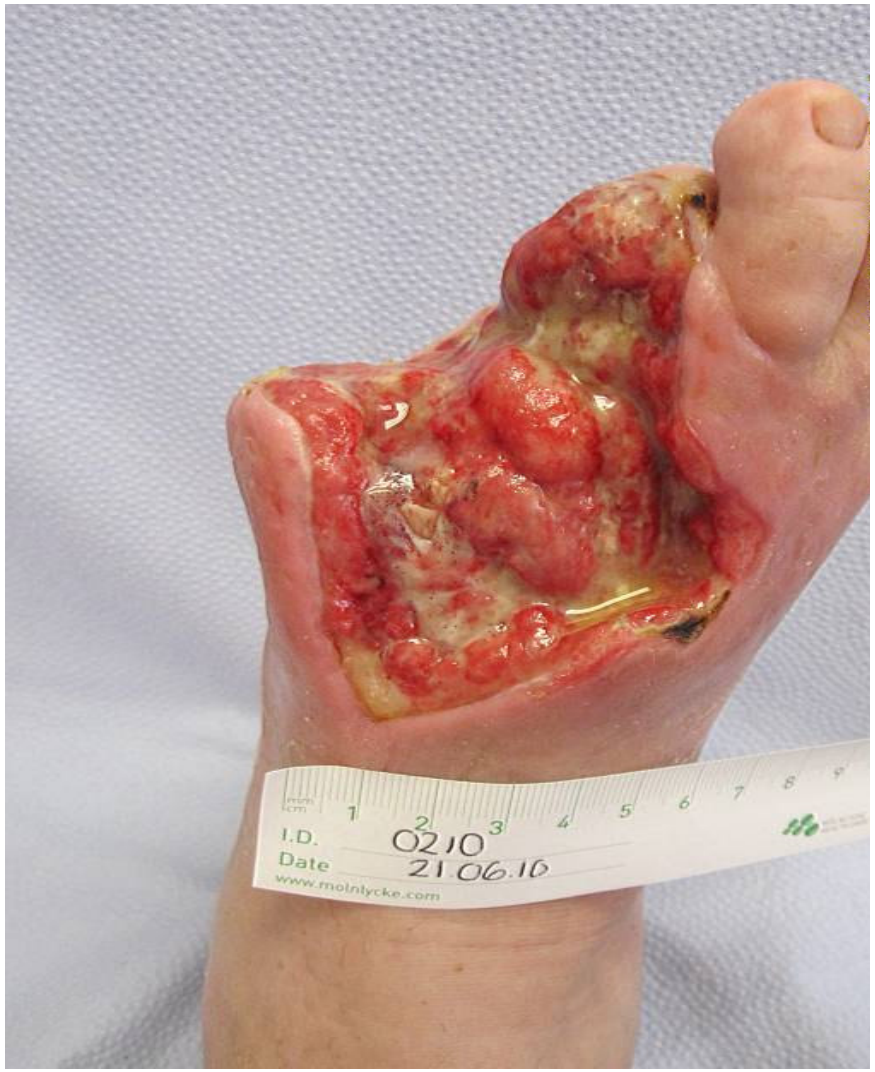
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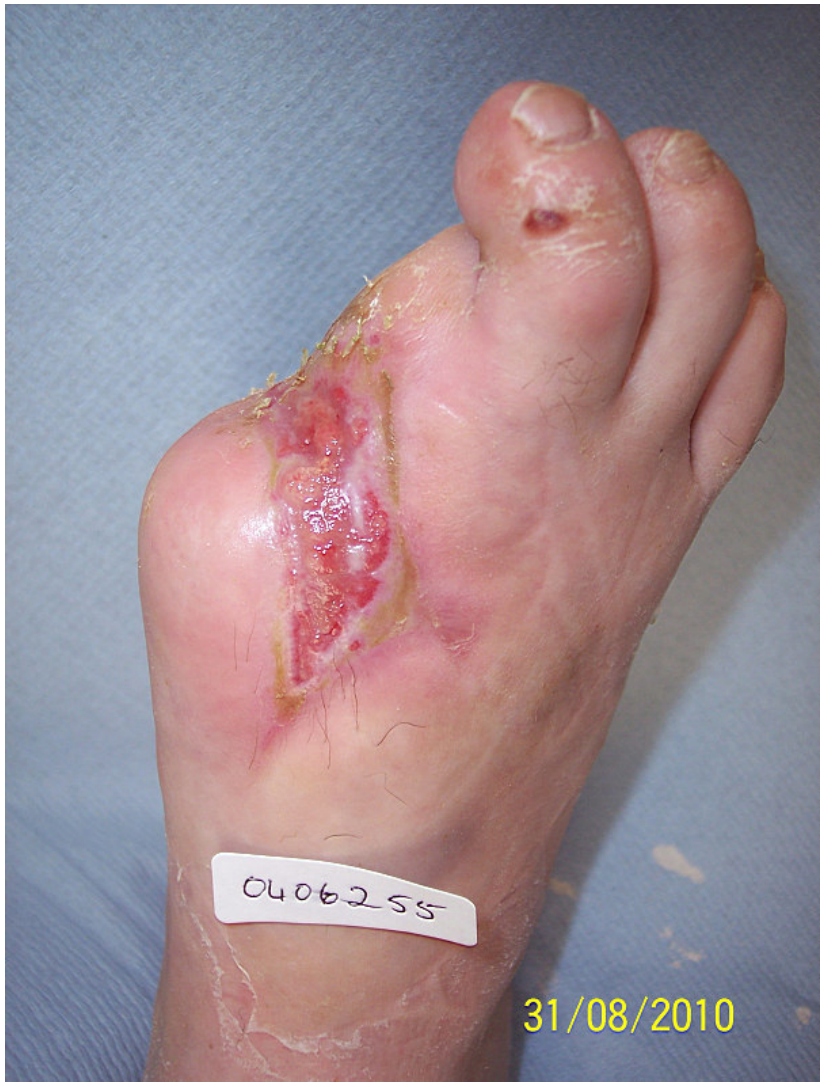
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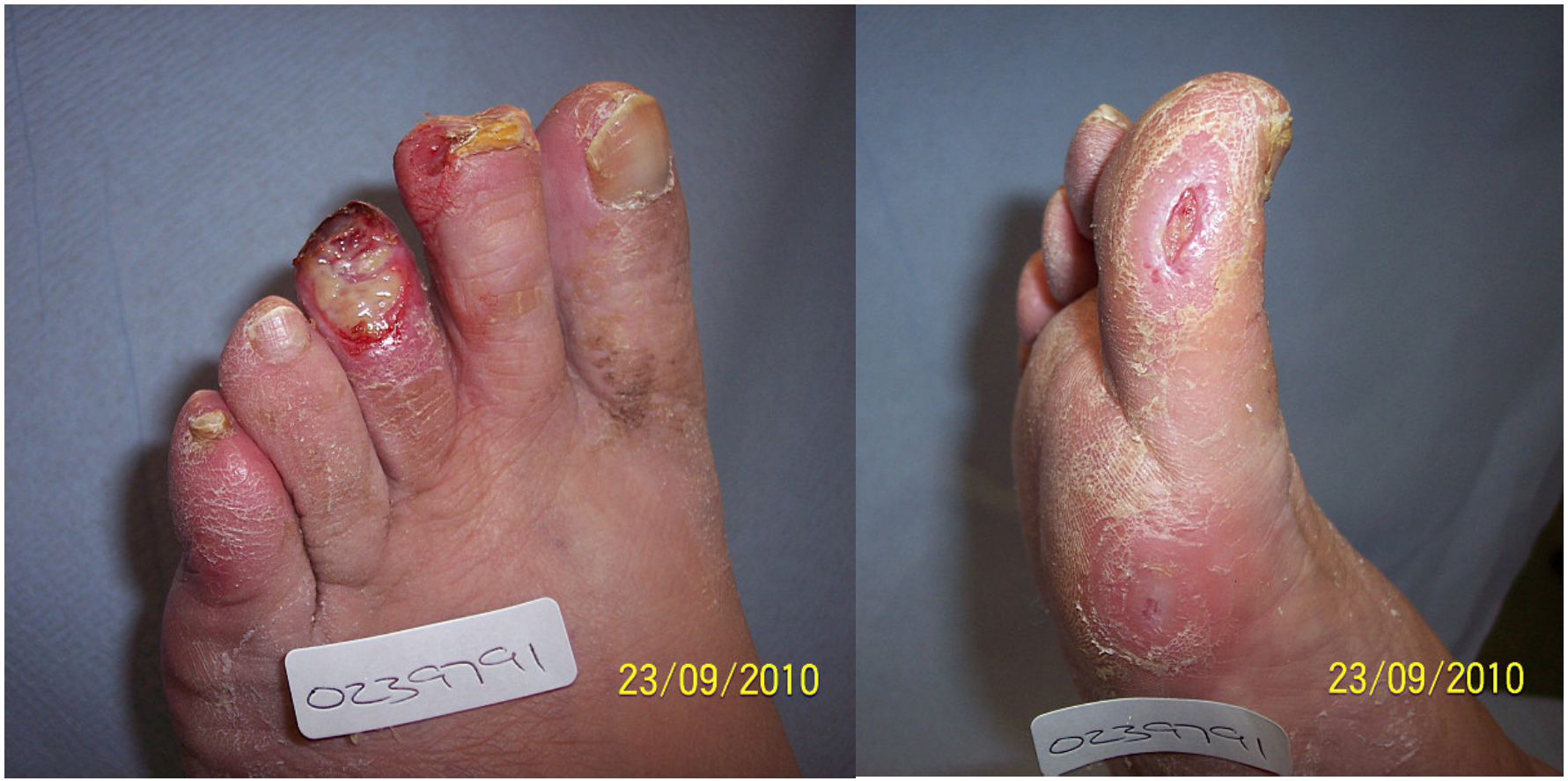
Mother

Medical History

- Female aged 70
- 2000 diagnosed with type 2 diabetes on insulin
- 2009 HbA1c 10.5% 91(mmol/mol)
- Ex-smoker
- Retinopathy
- Myocardial infarction

Foot History

- No palpable foot pulses
- L/Foot ABPI 0.6
- Neuropathic
- 2010 first referred to foot clinic
- Ulceration apex L/2nd toe deep to bone
- Subsequently went out in CROCS developed blistering on the R/foot attended A&E and then foot clinic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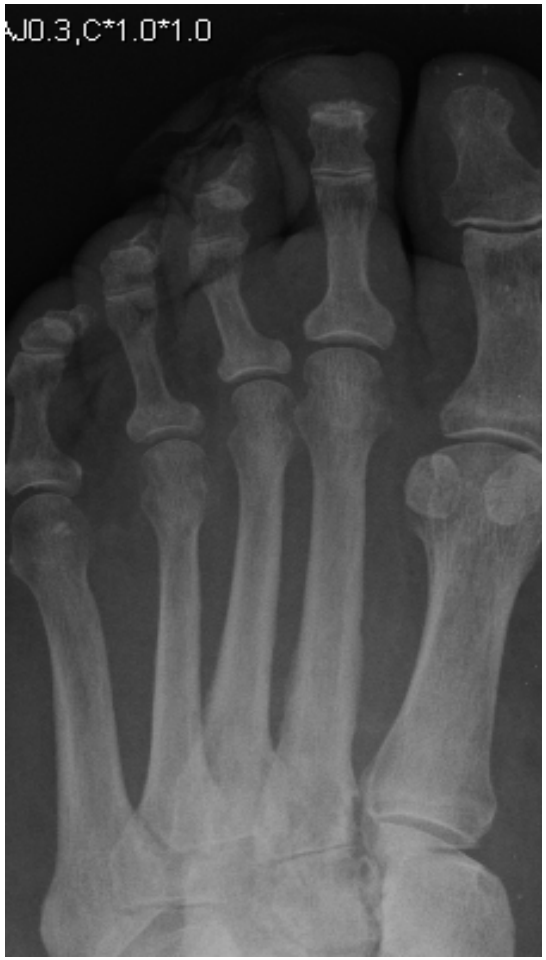
CT imaging

On the left side the common femoral artery severely disease and calcified producing tight stenosis just above its birfurcation. The profunda is patent. The SFA is diffusely diseased with multiple stenoses throughout its length. The below knee popliteal artery is very attenuated. There is continuity into the anterior tibial artery but I suspect the tibioperoneal trunk is occluded. The common peroneal does reform proximally.

Treatment

- Femoral endartectomy
- Amputation L/2nd toe
- R/Foot healed uneventfully
- Remains inpatient as a result of surgical complications



Current Situation

- Father is still alive
- Mother remains an inpatient under the care of the vascular team
- Daughter is currently attending the diabetic foot outpatient clinic with ulceration to the R/5th toe as a result of a rubbing from shoes
- Son has not been seen in the diabetes centre or diabetic foot outreach clinic for several months. He also regular fails to attend his renal appointments
- 2nd son has now been diagnosed with type 2 diabetes
- He is already an amputee as a result of RTA several years ago

Discussion

- Nobody in this family has an HbA1c in single figures for very long
- Despite seeing the ramifications of poor diabetes control they all fail to modify there behaviour
- Do they feel amputation is inevitable?
- The family still fail to come straight to foot clinic in the event of a foot problem
- Patient education seems futile
- Is there anything else the foot team can do, before another toe or leg is lost
- Multidisciplinary working involving the limb fitting service is essential for the long term survival of the remaining limb

Conclusion