

Audit of Practice Demonstrating Preventable Causes of Foot Osteomyelitis, Septic Arthritis and Bacteraemia in Rheumatology Patients Within the Belfast Trust

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Shoes And Socks Off!

Introduction

At the start of the COVID-19 pandemic many face-to-face reviews were reduced. This coupled with the fact that patients were reluctant to attend hospital resulted in delayed treatment of foot ulceration.



Aims/Background

- The prevalence of foot ulceration in adults with rheumatoid arthritis (RA) (US,UK, Netherlands) is 10-13%. Results are similar in RA and Psoriatic Arthritis patients in the N.I. Rheum Gain Audit (2018). Patients on DMARDs and biological therapy are particularly at risk of infection and the cardinal signs can be masked.
- Since the start of the pandemic, we noted an increase in infected foot ulcers that required hospital admissions due to the following:
 - Osteomyelitis
 - Septic arthritis
 - Bacteraemia
- These were especially increased in patients who are on biologics.

Method

We reviewed all foot ulcer cases over a 9-month period and selected those which led to medical input or hospital admission. From the 15 cases identified 5 were highlighted as fulfilling one of the above criteria.

Results

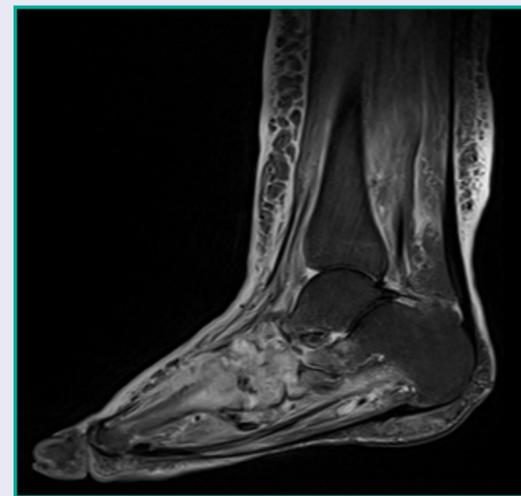
- Of the 5 patients identified, 3 were female and 2 were male. The mean age was 73.
- All had a background of Seropositive Rheumatoid Arthritis (SPRA), were on biologic therapy and had chronic foot ulceration which was present for at least 6 months. 80% had osteomyelitis and septic arthritis, 40% had a bacteraemia.

Review demonstrated the following:

- A lack of communication between health professionals
- No routine foot examination prior to biologic infusions.
- X-rays were not always timely despite clinical bony involvement.
- Wound swabbing was not always arranged.
- Patients were often not aware of the implications of foot ulceration.
- These were all opportunities missed

Case Study

- 74 year old female: SPRA, T2DM, PVD and CKD. Tocilizumab weekly. Severe foot deformities.
- History of digital ulceration since 2015 and regularly attended the Community Podiatry service.
- August 2017 referral made to Orthopaedics due to disarticulation of both 2nd toes. Patient declined intervention at this time.
- November 2019 Left 1st MPJ wound developed. Not probing to bone
- January 2020 ABPI showed calcification of arterial system.
- March 2020 Family declined podiatry input due to concerns over COVID-19 and patient's daughter redressed foot ulceration. Virtual podiatry review by telephone contact.
- June 2020 – IV Tocilizumab restarted since November
- July 2020 – Community podiatry note left 2nd toe dorsal PIPJ 1x1 cm. Bone extrusion. IV Tocilizumab given at clinic – no areas of concern noted. Previous ulcer on Left 1st MTP joint now healed.
- August 2020 – Community podiatry note wound improved and reduced in size to 0.6 x1cm
- September 2020 – IV Tocilizumab given at clinic – no new areas of concern
- October 2020 – IV Tocilizumab given – wound documented as healed. New ulceration right 4th toe.
- November 2020 – IV Tocilizumab given. Patient attends rheumatology with painful swollen left foot. Admitted to Musgrave Park Hospital – diagnosed with left midfoot osteomyelitis.
- Due to the patient being on Tocilizumab her inflammatory markers were never raised and her white cell count remained normal.



Conclusion

We have identified preventable causes of the aforementioned criteria and have put the following actions in place:

- Shared learning across the trust with all members of the multidisciplinary team – this includes education sessions with doctors, nurses, podiatrists, physiotherapists and occupational therapists.
- Created a poster as an aide memoir for staff and patients about the importance of foot examination, this is shown to the right.
- Developed a patient information leaflet to increase awareness of the importance of foot care especially for those on immunosuppressant drugs.
- Rolled out a GP education programme.
- Developed a referral pathway for rheumatology patients with foot ulceration.

We hope that this will reduce the incidence of these complications in the future.

Rheumatology Patients
Are you on immunosuppressant therapy (DMARD/biologics)?

Shoes And Socks Off




FEEL for areas of hard skin

LOOK for red areas, blisters and wounds

ASK someone to help if you are unable to do so

GET HELP from medical professional if there is a skin break

Thank you!

HSC Belfast Health and Social Care Trust