Abstract AB0861 Figure 1. Sequential steps employed to recruit African Americans to gout to a registry

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AB0862

EFFICACY AND SAFETY OF US-GUIDED INJECTIONS OF THE KNEES WITH HYALURONIC ACID IN PATIENTS AFFECTED BY OSTEOARTHRITIS ASSOCIATED TO CALCIUM PYROPHOSPHATE DEPOSITION DISEASE: PRELIMINARY RESULTS

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Background: Calcium pyrophosphate deposition disease (CPPD) and Osteoarthritis (OA) are often associated (1). However, is still controversial how calcium pyrophosphate (CPP) deposits could affect OA features (1) and, eventually, the response to the OA treatments.

Objectives: To evaluate the efficacy and the safety of Ultrasound (US)-guided injections of the knees with Hyaluronic Acid (HA) in patients with OA and CPPD, compared to OA.

Methods: Consecutive patients, referred to the outpatient clinic with a clinical and radiological knee OA required intra-articular (IA) treatment with high molecular weight (HMW) HA and without any clinical inflammatory signs, were enrolled. No limits about OA score [Kellgren-Lawrence (K-L) score] were used. Patients with diagnosis or suspicion of other chronic inflammatory rheumatic diseases were excluded. For each patients, were recorded age, sex, Body Mass Index (BMI) and K-L score. The presence of CPP deposits were evaluated by US at level of menisci and knee hyaline cartilage, using the OMERACT criteria (2). All the patients were submitted to three IA injections with HA, performed every week. Before each injection, the synovial fluid (SF) was aspirated and its amount recorded. All SF aspiration and injections were US-guided. At

baseline and before each injection, the Western Ontario and Mc Master Universities Osteoarthritis Index (WOMAC) was submitted to the patients. The data were analyzed using a Wilcoxon test for independent samples and a regressive logistic model, including age, sex, BMI, K-L, SF and CPPD presence.

Results: We enrolled 23 patients (12 woman [52,17%]) with a mean age of 67,65 yo (SD±11,93), a mean BMI of 27,43 (SD±4,82) and a median K-L score of 3 (range 2-3). 10/23 (43,88%) patients were identified as affected by CPPD at US [6 woman, mean age 67,39 yo (SD±12,1), BMI 27,14 (SD±4,4), median K-L of 3 (range 2,75-3,25)]. No differences about age, BMI and K-L score were observed. Regarding the baseline WOMAC, the CPPD group mean [955,89 (SD±416,5)] was significantly higher (p<0,01) than OA [379,5 (SD±225,21)].

Considering the short term effect, the WOMAC score improved in both groups after the first injection, but it was significantly higher in the CPPD group (p<0,01) and the regressive model analysis, showed that only the CPPD is correlate to the WOMAC change.

After the second injection, the improvement continues but without differences. The regressive model showed that no variables correlate with WOMAC. The data from the long term follow up are not still available. Regarding the SF amount, no differences statistically significant were observed between the two groups at every time.

Conclusion: The US-guided injections with HMWHA at knees appear effective and safe in patients with OA associated to CPPD. Particularly the presence of CPP does not appear a risk factor for the development of inflammation. However, these results are preliminary and should be confirmed in a larger cohort and for a longer follow-up.

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AB0863

AN AUDIT OF MANAGEMENT OF GOUT ACCORDING TO THE BRITISH SOCIETY FOR RHEUMATOLOGY GUIDELINES,2017 IN A TEACHING HOSPITAL RHEUMATOLOGY UNIT

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Background: Gout is the most common form of inflammatory arthritis worldwide. Its prevalence is 2.49% in UK general practice. In spite of the availability of effective treatments in the UK, the incidence of gout has increased in the last decade, the reasons for which are many. There is also evidence that gout is being sub-optimally treated in primary and secondary care. (1)

Fewer than 50% of patients receive urate lowering therapy (ULT), and many patients on ULT do not achieve the target serum urate level of 300 µmol/l or lower, which is essential to prevent further attacks of gout. This target has been proposed by the British Society for Rheumatology (BSR), in the latest guideline from 2017. (2)

Objectives: To assess the compliance of gout management with the BSR 2017 guideline in our unit (a teaching hospital rheumatology department): a) Urate lowering therapy should be discussed with all patients diagnosed with Gout.

b) ULT is strongly advised in patients with recurrent attacks (>2 over 12 months), chronic gouty arthritis, tophi, renal impairment (eGFR <60), patients on diuretics and primary gout at an early age.

c) Aim of urate lowering to reduce serum urate to <300µmol/l. (2)

Methods: Inclusion criteria:

All patients being treated for gout in the department of rheumatology, between 1st October 2016 to 31st September 2017, were included in this retrospective study. Demographics, treatment details obtained from electronic patient records. Adherence to the BSR guidelines was expressed as percentage.

Results: Total number of patients with gout was 113. Among these, 83 patients remain under rheumatology follow up, 30 were discharged within the 1 year period. 113 were considered were audit standard 1 and 2, and 83 were considered for standard 3.

Audit standard	Expected	Achieved
Urate lowering therapy should be discussed with all patients diagnosed with Gout.	100%	100% (113/113)
Strongly advised in patients with recurrent attacks (>2 over 12 months), chronic gouty arthritis, tophi, renal impairment (eGFR <60), patients on diuretics and primary gout at an early age	90%	92.9% (105/113)
Aim of urate lowering to reduce serum urate to <300µmol/l	80%	36% (30/83)

Among the 113 patients being followed up in Rheumatology, 83% were on Allopurinol, 19 were on Febuxostat, 1 patient was on Benzbromarone. 10 patients were not on Urate lowering therapy. However, 2 among them had first attack of gout without any sign of chronicity, organ damage or tophi, so not started on ULT.

- Median Allopurinol dose was 300mg. (IQR 200mg–700mg).
- 25 patients among the 113 had tophaceous gout, and 5 of them achieved BSR treatment target
- 22/83 (26.5%) patients on Allopurinol achieved BSR treatment target of <300µmol/l. 7/19 (37%) patients on Febuxostat achieved BSR treatment target of <300µmol/l

Conclusion: It is clear that a “treat to target” approach have not been adopted for x% of the patients. Gout has been shown to have better outcomes with treat to target approach. (3)

Adequate escalation of ULT is essential to achieve target serum urate level, where as the median dose of Allopurinol here is 300mg.

Gout remains inadequately treated, even in secondary care

- A consistent “Treat to target” approach needed for treatment of gout.
- Annual gout review clinic may be an effective strategy and is now being implemented as a result of this audit.

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AB0865 THE EFFECT OF ZOLEDRONIC ACID ON CHARCOT NEUROARTHROPATHY

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Background: The Charcot foot syndrome is a serious neuroarthropathy that may threaten the functional prognosis of diabetic patient. Some studies had emphasized the beneficial effect of bisphosphonates such as pamidronate and alendronate on the reduction in bone turnover markers in this disease. Though, the use of Zoledronic acid in the treatment of Charcot foot was only evaluated in two clinical trials and its efficacy remains controversial (1, 2).

Objectives: The aim of this study was to investigate the clinical and radiological efficacy of Zoledronic acid in patients with diabetes and acute Charcot neuroarthropathy.

Methods: A prospective 2-year follow-up study was carried out on eight patient with type 2 diabetic and acute Charcot neuroarthropathy. All our patients had a physical examination and podiatry exam. The stage of the neuroarthropathy has been assessed according to the clinical and the radiographic findings (Eichenholtz Classification). All patients were assigned to intravenous infusions of 4 mg Zoledronic acid.

Results: The mean age of the study group was 61.4 +/- 4.5 years. The mean age of the onset of foot pain was 18.3 +/- 1.5 years. The midfoot involvement was bilateral in 6 patients and unilateral in the other two. A

biological inflammatory syndrome was found in 3 patients with a mean erythrocyte sedimentation rate (ESR) level at 43 mm after one hour. Foot X-rays were abnormal at all cases. The clinical outcomes at one month after Zoledronic acid infusions were the complete disappearance of acute symptoms in 6 patients and the improvement of the pain in one patient with a decreased Visual Analogue Scale (VAS) for pain by 30%. One patient had a persistence of the pain (VAS for pain at 5mm). A radiological Control was performed after 6 months for 5 patients. All of them had bone consolidation and remineralization.

Conclusion: Our study showed that the Zoledronic acid, given as a single dose, had a beneficial effect on clinical and radiological features in diabetic patients with acute Charcot neuroarthropathy. Despite our encouraging outcomes, further prospective and randomized studies are needed to confirm our preliminary results.

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AB0865 GOUT IN HOSPITALISED PATIENTS FOR CARDIOVASCULAR DISEASES: PREVALENCE AND MANAGEMENT STATUS

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Background: Gout is an independent risk factor for cardiovascular diseases (CVDs), where the urate crystal-led inflammatory state likely has a key role. Crystal dissolution may carry with cardiovascular benefits, so optimal management of gout patients is essential, especially in high-risk individuals, such as those hospitalised for CVDs. Although the prevalence of gout in Western country adults is about 2-4% [1], the rate and characteristics in inpatients with CVDs remains to be defined.

Objectives: To determine the prevalence of gout, characteristics and management in a hospitalised population for CVDs.

Methods: Observational, descriptive, cross-sectional study. Patients admitted for CVDs in the Cardiology, Neurology and Vascular Surgery units of a tertiary centre were recruited following a non-consecutive, systematic sampling up to reaching the estimated minimum sample size. A face-to-face interview and a review of electronic health records were performed, in order to collect clinical, laboratory and management data regarding CVD and gout. Gout diagnosis was established in the interview using ACR/EULAR 2015 criteria. In addition, prior clinical or crystal-proven diagnoses at records were also registered. 95% confidence intervals (95%CI) were calculated for primary variable (gout prevalence), and comparisons were performed by Student's t, chi-squared and Fisher's exact tests.

Results: 299 patients were interviewed, 33 were excluded, and the final study sample was 266 participants. They were predominantly males (69.9%) and Caucasians (96.6%) with a mean age of 68 years (SD±12). The CVDs leading to admission were acute coronary syndrome (18.8%; n=50), heart failure (13.2%; n=35), stroke or transient ischemic attack (20.7%; n=55) and peripheral artery disease (47.4%; n=126).

Gout was identified in 40 individuals (prevalence 15.0%; 95%CI 10.9-19.2). Prior gout diagnosis in records was found in only two-thirds of them, mostly clinical (Table).

Patients with gout were older (72±9 vs 68±13 years, p=0.026) and showed higher rates of chronic kidney disease (55.0% vs 23.0%, p<0.001) and use of diuretics (55.0% vs 38.5%, p=0.05), with no differences in other variables.

The disease was long-standing though low numbers of flares and involved joints were referred (Table). Tophi were seen in about 8%. The serum urate levels were not properly controlled, both at the time of the CVD and as a median of the previous five years, and only one-third of the patients were on target (<6 mg/dl). Despite 70% of patients having been treated with urate-lowering agents at some point, at admission only half remained treated (38.5% of them were on target). Nearly a quarter of patients used prophylactic colchicine.