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#### AB1227-HPR VALIDATION AND APPLICABILITY OF A NOVEL OSTEOMALACIA KNOWLEDGE BASED EDUCATIONAL INSTRUMENT (OKQ)

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**Background:** Osteomalacia is caused by a deficiency of vitamin D and can be corrected by changes in diet, lifestyle and supplementation. Consequently, it is a condition where education has a primary role in prevention.

**Objectives:** If educational interventions are to be developed and evaluated, then an instrument for measuring knowledge is required. This has led us to develop a novel Osteomalacia Knowledge Questionnaire (OKQ).

**Methods:** Based on nominal group technique, a steering group of people who are knowledgeable about osteomalacia, educational theory and questionnaire development was convened. The group decided to use true and false questions. Important areas of knowledge of osteomalacia were first determined by the group and then relevant statements which were true or false were written and grouped into 8 sections of 5 questions, each covering the different areas of knowledge. This resulted in a knowledge instrument with 40 questions in all. The questions were tested for utility and ambiguity in the group and modified and replaced accordingly.

The questionnaire was then trialled in 37 people of South Asian origin (an osteomalacia susceptible population), in three groups. Participants were initially administered the OKQ and then received an educational intervention comprising a practitioner led education session on osteomalacia, including a presentation and written or electronic material. Participants were re tested with the OKQ after 6 weeks.

Although there is no "gold standard" for measuring knowledge about osteomalacia, if effective, increased knowledge should lead to an increase in vitamin D (Vit D) levels and a decrease in parathormone (Pth) levels. Vitamin D and Parathormone levels were measured alongside the OKQ in 2 of the groups before and after the educational intervention

**Results:** Baseline knowledge about osteomalacia was low pre education averaging only 12.7 out of 40 (range 0–29) (n=37).

A total of 30 participants (81%) attended for the follow up test. They averaged a score of 13.9 at baseline and 23.4 at follow up. This was statistically significant (p=0.002 Mann Whitney) and demonstrated sensitivity to change of the OKQ.

Knowledge at baseline was correlated with vit D and Pth blood levels for two of the groups (n=27). This showed correlation coefficients of 0.128 and -0.407 respectively. For change of knowledge and change of parathormone (n=21) the r value was -0.324 suggesting a relationship between knowledge and Pth that is worthy of confirmation through further studies.

**Conclusions:** A novel questionnaire has been developed that has face validity for testing knowledge about osteomalacia. It has proved feasible and shown sensitivity to change. It has also shown promising correlation with biochemical measures of osteomalacia.

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**Disclosure of Interest:** None declared

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#### AB1228-HPR IN ABSENCE OF SPECIFIC ADVICE, WHAT DO THEY EAT AND AVOID? DOES IT MATTER? DIET EVALUATION OF INDIAN (ASIAN) PATIENTS OF RA IN A COMMUNITY RHEUMATOLOGY CLINIC

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**Background:** Diet in RA is generally considered to be inadequate/inappropriate. Rheumatologists often neglect this important patient concern. ACR/EULAR guidelines do not provide adequate advice. Ayurveda (ancient India medicine system) with highly restricted diet is popular with Indian patients.

**Objectives:** To evaluate diet adequacy in patients of RA in our setting

**Methods:** 139 consenting patients (ACR 1987 classified) on long term supervised care and 165 unmatched healthy subjects (mean age 37.7 years) were interviewed in no particular order as per protocol; cross sectional design. A 10 day diet recall period and a-priori validated questionnaires was used. National (India) recommended daily allowance (RDA) and diet analysis (web based and food composition tables) methods were used. Standard CRF captured clinical data [mean pain VAS 4.6 cms, mean HAQ score (Indian version) 6.5]. Standard statistical analysis (SPSS) was done; significant p<0.05.

**Results:** Table 1 (women) and 2 (men) show average daily energy expenditure and consumption of selected food items, RDA and p values (on comparison: P (1) for patient versus control, P (2) for patient versus RDA: p by Mann

Whitney). Compared to RDA, patient consumption was significantly higher for most of the items except K; includes calcium, phosphorus, zinc, iron, folic acid, vitamin B group (data not shown in Tables). When compared to healthy subjects, consumption was significantly lower for female patients but not different for men (except for K). Reduction in diet K in RA group was more pronounced for women. All patients tested normokalemic (mean serum K+ 4.37 mEq/L). No meaningful correlation between diet components and disease measures (data not shown). Food avoidance patterns identified a-priori did not seem to impact disease measures (data not shown). 44% RA and 77% controls consumed vegetarian diet (excluding eggs). Patient dependence for diet recall and measure was the important limitation.

Table 1. Women RA subjects and healthy control

Component	Patient (n=115)	Control (n=122)	RDA	P (1)	P (2)
Energy (kilocalorie)	2825	3436	2230	0.02	0.03
Carbohydrate (g/d)	457	532	NA	0.16	0.00
Protein (g/d)	94	127	55	0.00	0.00
Fat (g/d)	69	84	25	0.00	0.00
Sodium (mg/d)	3112	3221	1902	0.56	0.00
Potassium (mg/d)	1223	3393	3225	0.000	0.00

Table 2. Men RA subjects and healthy controls

Component	Patient (n=22)	Control (n=43)	RDA	P1	P2
Energy (Kcal)	2737	2829	2730	0.74	0.87
Carbohydrate (g/d)	439	425	NA	0.08	–
Protein (g/d)	92	109	60	0.33	0.07
Fat (g/d)	68	77	30	0.36	0.01
Sodium (mg/d)	3156	3180	2012	0.5	0.03
Potassium (mg/d)	1755	3562	3750	0.002	0.00

**Conclusions:** The diet of RA patients seemed adequate except for an intriguingly low K. We speculate that patients eat lesser vegetables and fruits that source K. K sub serves several physiological functions that may be deranged in RA and contribute to disease progression. This would need further investigation.

**Acknowledgements:** In contrary to our expectations and reassuringly, the diet of RA patients seemed adequate except for an intriguingly low potassium which should be investigated. We speculate that patients eat lesser vegetables and fruits that source potassium.

**Disclosure of Interest:** None declared

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#### AB1229-HPR EVALUATION OF RHEUMATOLOGY NURSE-LED CLINIC IN MANAGING PATIENTS WITH RHEUMATOID ARTHRITIS: A RETROSPECTIVE STUDY

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**Background:** Rheumatoid arthritis (RA) is a chronic, systemic, autoimmune disease characterized by inflammation of the synovial joints. Management of RA patients are usually provided by rheumatologists only. Enhanced care provided by rheumatology nurses between rheumatologist consultations may have beneficial effects in terms of symptom control. In Hong Kong, whether rheumatology nurse care model can favor to patient outcomes remained uncertain.

**Objectives:** The aim of the study was to examine the clinical effectiveness of rheumatology nurse clinic in controlling disease activity as expressed in change of Disease Activity Score in 28 joints in RA patients compared with usual care led by rheumatologists only.

**Methods:** This was a retrospective study. Two historical groups of RA patients (30 patients at each group) were identified from attendance records between 1/1/2015 and 20/7/2015 at the rheumatology outpatient clinics. Group 1 comprised of patients who attended rheumatology nurse clinic in between the doctor clinic consultations. Patient education delivered by the rheumatology nurse included disease mechanism, treatment aim, pain management and checking medication adherence according to prescription. RA treatment could also be intensified if needed. Group 2 comprised of patients managed by rheumatologists only. Primary outcomes were changes in disease activity at follow-up visit after the doctor clinic and nurse clinic.

**Results:** The mean follow-up duration for the study cohort was 20 weeks (median: 22.5 weeks). Patient global assessment and DAS 28 were similar for both groups at baseline. At follow-up, patient global assessment and in the nurse group (Group 1) decreased from mean  $\pm$  SD: 42 $\pm$ 24.7 at baseline to 28.7 $\pm$ 24.6 at follow-up, which was approaching the minimal clinically important improvement (MCII=-15). With regards to DAS28, there was a 8.2% decrease (absolute change: -0.38 $\pm$ 1.14) in DAS28 in group 1 suggesting a trend of improvement (p=0.081). The corresponding decrease in group 2 was 1.2% (absolute change: -0.05 $\pm$ 1.47) and such decrease was not significant (p=0.863). Changes in DAS28 did not exceed minimal clinically important improvement in both groups (MCII=-1.2).

**Conclusions:** This study demonstrates the short-term benefit of a nurse-led program on RA disease management. Future multi-center studies with a randomized controlled design and a larger sample will be required to confirm our findings.