Background: Osteoarthritis is a very common chronic disease. The information needs of patients vary depending on the health issue. Social media sites represent a novel source of health information and advice for patients with chronic diseases, such as osteoarthritis. Almost half of them use the internet to look for health related information [1]. No study has assessed the impact of social media on osteoarthritis and its treatment.

Objectives: The purpose of this study was to evaluate frequently discussed osteoarthritis treatments on the social media Twitter.

Methods: We retrospectively analyzed tweets, published between 1st and 31st January 2020, containing the keywords "osteoarthritis". Only English language tweets were included. Tweets referred to veterinary medicine were excluded.

Results: 3587 tweets were analyzed. We identified 1737 tweets related to osteoarthritis treatment between 1st and 31st January 2020 (49.8%) (Figure 1). Dietary interventions were the most discussed treatment (18.3%, n=318/1737), including fruits, vegetables and plants (n=101), dietary supplements and vitamins (n=80), and spices (n=19). Physical medicine and rehabilitation (17.6%, n=305/1737) including sport (n=151), physiotherapy (n=70) and rehabilitation (n=57), were commonly discussed. Local therapies for osteoarthritis were also discussed by Twitter users (15.8%, n=274/1737). These included topical treatments such as anti-inflammatory gels and creams (n=23), and more invasive local treatments including intra-articular joint injections with corticosteroid (n=56), hyaluronans (n=29), stem cells (n=97), and Platelet-Rich Plasma (n=52). The frequently used systemic drugs were analgesia and non-steroidal anti-inflammatory drugs (n=113). Surgery and interventional radiology (genicular artery embolization) were also discussed (11.5%, n=199/1737). 5.6% tweets (n=97/1737) were related to alternative therapies. Predominant themes were related to marijuana (n=23), acupuncture treatment (n=17), homeopathy (n=10). Last but not least, 356 tweets (20.5%) referred to other websites including health programs.

Conclusion: Our results demonstrate that osteoarthritis treatment is frequently discussed in published tweets. Thereby, social media could have an impact on behaviors and adherence on medication, and it seems interesting that learned societies, involved in osteoarthritis treatment, communicate more using social media.

Figure 1. Osteoarthritis treatment discussed in published tweets

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AB0808

A SYSTEMATIC REVIEW ON SYNDEMICS IN RHEUMATIC AND MUSCULOSKELETAL DISEASES (RMDs)

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Background: Syndemics comprises the interaction of two or more biological diseases in different socio-cultural situations and in the context of varying healthcare standards that exacerbates their deleterious effects on the health of individuals, communities, and societies (1). There is increasing interest in using syndemics in the study of RMDs.

Objectives: To identify quantitative and qualitative RMDs studies focused on syndemics through a systematic review and synthesize the available evidence.

Methods: Inclusion criteria were using a syndemic framework in methods in RMDs studies. A systematic search of studies published from 2003 up to January 2021 was conducted in two electronic databases (SCOPUS and Web of Science). The systematic search was implemented (Figure 1): 1) the word syndemic(s) was searched using the advanced query string search, in the title, abstract, keywords, and text, to identify the relevant studies; 2) the publications were screened by three peer review groups; 3) the group evaluated each title and abstract and reviewed full-text articles to identify those relevant for review; 4) synthesis focused on identifying the variables of each study and integrating findings.

Results: The initial search yielded 658 unique articles, from which ten studies were identified as syndemics in RMDs. After full-text review, six studies were excluded due to not inclusion of a syndemic framework. Four studies were included (Figure 1). The first quantitative study was on eight Latin-American (LatAm) indigenous communities (n=6,155). RMD's were highly prevalent in the indigenous people (34.5%), RA prevalence was 2.4% in the Qom group of Argentina, and low back pain (LBP) being the most prevalent RMD (13.3%). RMDs were strongly associated with other comorbidities, unhealthy habits, low education levels, rural areas, socioeconomic conditions, and health inequality. The network analysis was the analytical approach using the Syndemic and Syndemogenesis Elements Modeler (SSEM). The second quantitative study focused on six urban/rural LatAm countries (n=55,724). LBP was significantly associated with comorbidities, unhealthy habits, low educational level, rural areas, and indigenous status. SSEM and cluster analysis showed a significant association between LBP prevalence and social variables. One qualitative study in fisher rural families (n=7) with three fisher rural generations from the Netherlands. A case study using life course theory. The first two generation reported syndemic vulnerability (psychological distress, cardiometabolic conditions, or musculoskeletal pain), and the third generation report less syndemic vulnerability, including musculoskeletal pain. A mixed study was identified focused on osteoarthritis with multimorbidities (cardiovascular, hypertension, diabetes mellitus) in an African American population (n=110) in the USA. The methodology was a descriptive secondary analysis and qualitative interviews. The study found that patients with hypertension (80.9%) reported greater chronic pain than those without. The lack of education added to the incorrect use of nonsteroidal anti-inflammatory drugs might contribute to the worst outcomes in this population, a significant burden of cardiovascular disease.

Conclusion: There is growing interest and urge for integrating syndemics in the study of RMDs. This review has demonstrated that there are only a few publications to date. The statistical power and the analytical approach (SSEM-Syndemic and Syndemogenesis Elements Modeler) in the two quantitative studies are relevant. The qualitative study demonstrated less syndemic vulnerability with better health conditions linked to better socioeconomic advantages. The mixed qualitative study did not show a syndemic framework. It is necessary to carry out studies in RMDs from the syndemic perspective to document the complexity of the clinical and social determinants related to these diseases.

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Figure 1. Flow diagram of the systematic literature search and review, using the PRISMA method, of records of syndemic with application in RMDs.

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AB0809 PADUA PREDICTION SCORE COMBINED WITH SERUM ALBUMIN FOR THE IDENTIFICATION OF VENOUS THROMBOEMBOLISM OF HOSPITALIZED PATIENTS IN THE DEPARTMENT OF RHEUMATOLOGY

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Background: Venous thromboembolism (VTE) includes thrombotic disease of venous system, but primarily includes lower extremity deep vein thrombosis (DVT) and pulmonary embolism (PE). Population-based epidemiological studies have shown an association between systemic autoimmune diseases and VTE[1]. The Padua prediction score(PPS) is a new 20-point risk assessment model proposed by Professor Barbar et al[2] in 2010. A large number of researches have shown that low serum albumin concentration is associated with an increased risk of VTE [3],but there is a lack of studies on serum albumin in VTE, and there are no reports on PPS in rheumatology inpatients.

Objectives: To investigate the status of VTE in patients in the department of rheumatology, and to explore the value of PPS combined with serum albumin in the identification of VTE in this patient population.

Methods: Baseline data of inpatients in rheumatology department were collected at Sichuan Provincial People's Hospital from September 2018 to September 2020. Occurrence of VTE was compared between high and low risk groups. PPSs were analyzed in VTE and non-VTE patients. Multivariate logistic regression was used to analyze the independent risk factors of VTE. The receiver operating characteristic curve was used to evaluate the probability of value of rheumatic inpatients with VTE assessed by PPS,serum albumin and PPS with serum albumin. $P < 0.05$ indicates that the difference was statistically significant.

Results: A total of 2282 patients were included in this study, and 50(2.2%) had symptomatic VTE. Among the symptomatic VTE cases,38(1.6%) had DVT only,8(0.4%) had PE only, and 4(0.2%) were diagnosed with DVT and PE. PPSs in VTE and non-VTE groups were 3.00(2.00~6.00) and 2.00(1.00~2.00) respectively ($P < 0.05$). One hundred and eighty-eight cases was divided into high-risk group of VTE ($PPS \geq 4$), while 2094 cases ($PPS < 4$) were in the low-risk group. Logistic regression analysis showed that known thrombophilic condition, history of VTE, reduced mobility, and D-dimer were independent risk factors of VTE in rheumatology patients, the odd ration(OR) values were 161.90, 26.08, 8.73,and 1.04. Serum albumin was the independent protection factor [OR= 0.92(95%CI:0.87~0.98)]. The AUC of PPS model, serum albumin model and the combined predictive model were 0.77, 0.75, 0.84, respectively. The difference between the combined prediction model and PPS model was statistically significant ($Z = 3.813$, $P < 0.05$). The optimal sensitivity of PPS and serum albumin models is 60%, 82%, respectively, and the optimal specificity of is 82.5%,58.6%, respectively. The combination model corresponds to a sensitivity of 62% and a specificity of 90.4%.

Conclusion: The incidence of symptomatic VTE was relatively higher in hospitalized patients in rheumatology department. Serum albumin was the protective factor. The combination of albumin and PPS can improve the accuracy of screening for VTE in rheumatology in-patients.

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AB0810 COST-EFFECTIVENESS ANALYSIS OF THE CLINICAL APPROACH FOR RA PATIENTS IN THE EARLY PHASE VERSUS THOSE IN THE ESTABLISHED PHASE FROM A FOURTH-LEVEL HEALTH SERVICE PROVIDER INSTITUTION IN COLOMBIA

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Background: Rheumatoid arthritis (RA) is a chronic systemic inflammatory disease that without treatment causes disability, pain, quality of life impairment, and premature mortality. It causes significant economic repercussions on patients, their families, and the health system. The costs of RA for Sanitary Systems are described in terms of medications and hospitalization. Also, the cost of treatment for patients whose disease was not adequately controlled from an early stage may involve joint replacement surgery and prolonged hospitalizations.

Objectives: To determine and analyze the cost-effectiveness of the clinical approach to rheumatoid arthritis in a cohort of patients in the early phase *versus* a cohort of patients in the established phase from a fourth-level Health Service Provider Institution in Colombia, from the perspective of the third-party payer with a time horizon of six-months.

Methods: An economic evaluation of the cost-effectiveness of the clinical approach was carried out in the early phase *versus* the established phase in a cohort of patients from May 2013 until December 2018, with rheumatoid arthritis from a fourth-level Health Service Provider Institution in Colombia, from the perspective of the third-party payer with a time horizon of six-months. The costs and effectiveness of each of the phases were estimated. A decision tree model was created, and the incremental cost-effectiveness ratio was calculated. The deterministic and probabilistic sensitivity analysis was performed.

Results: The early phase clinical approach for patients with rheumatoid arthritis represents savings of approximately 600 USD per patient in remission or low disease activity level in the first 6 months of follow-up from the perspective of the third-party payer.

Conclusion: The clinical approach to rheumatoid arthritis in the early phase is a less costly and more effective alternative *versus* established phase and generates savings for the third-party payer with a time horizon of six-months.

Figure 1. Acceptability curve

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