Title: Health literacy and tuberculosis control: systematic review and meta-analysis

Author: Chauhan A., Parmar M., Dash G.C., Chauhan S., Sahoo K.C., Samantaray K., Sharma J., Mahapatra P., Pati S.

Abstract: Objective: To identify literature on health literacy levels and examine its association with tuberculosis treatment adherence and treatment outcomes. Methods: Two authors independently searched Pubmed®, Embase, CINAHL, PsycINFO, Scopus, LILACS, Global Health Medicus and ScienceDirect for articles reporting on health literacy levels and tuberculosis that were published between January 2000 and September 2023. We defined limited health literacy as a person's inability to understand, process, and make decisions from information obtained concerning their own health. Methodological quality and the risk of bias was assessed using the JBI critical appraisal tools. We used a random effects model to assess the pooled proportion of limited health literacy, the association between health literacy and treatment adherence, and the relationship between health literacy and tuberculosis-related knowledge. Findings: Among 5813 records reviewed, 22 studies met the inclusion criteria. The meta-analysis revealed that 51.2% (95% confidence interval, CI: 48.0-54.3) of tuberculosis patients exhibit limited health literacy. Based on four studies, patients with lower health literacy levels were less likely to adhere to tuberculosis treatment regimens (pooled odds ratio: 1.95; 95% CI: 1.37-2.78). Three studies showed a significant relationship between low health literacy and inadequate knowledge about tuberculosis (pooled correlation coefficient: 0.79; 95% CI: 0.32-0.94). Conclusion: Health literacy is associated with tuberculosis treatment adherence and care quality. Lower health literacy might hamper patients' ability to follow treatment protocols. Improving health literacy is crucial for enhancing treatment outcomes and is a key strategy in the fight against tuberculosis.

URL: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11132163/pdf/BLT.23.290396.pdf

Title: Lifestyle intervention for metabolic dysfunction-associated fatty liver disease: a 24-h integrated behavior perspective

Author: Keating S.E., Chawla Y., De A., George E.S.

Details: May 2024

Abstract: Introduction The prevalence, health and socioeconomic burden of metabolic dysfunction-associated fatty liver disease (MAFLD) is growing, increasing the need for novel evidence-based lifestyle approaches. Lifestyle is the cornerstone for MAFLD management and co-existing cardiometabolic dysfunction. The aim of this review was to evaluate the evidence for lifestyle management of MAFLD, with a specific lens on 24-hour integrated behaviour and provide practical recommendations for implementation of the evidence. Results Weight loss >= 7-10% is central to lifestyle management; however, liver and cardiometabolic benefits are attainable with improved diet quality and exercise even without weight loss. Lifestyle intervention for MAFLD should consider an integrated '24-h' approach that is cognisant of diet, physical activity/exercise, sedentary behavior, smoking, alcohol intake and sleep. Dietary management emphasises energy deficit and improved diet quality, especially the Mediterranean diet, although sociocultural adaptations to meet preferences should be considered. Increasing physical activity and reducing sedentary behavior can prevent MAFLD, with strongest evidence in MAFLD supporting regular structured moderate-vigorous aerobic exercise for 150-240 min/week. Resistance training in addition to aerobic exercise should be considered and prioritised for those who are losing body mass via diet and/or pharmacological approaches and those with sarcopenia, to minimise bone and lean mass loss. Limited evidence suggests that sleep is important for MAFLD prevention. Emerging novel approaches to diet and exercise may address some of the key barriers to behaviour change (e.g. lack of time, access to resources and social support).Future Directions Large-scale multidisciplinary trials in people with MAFLD with long-term follow-up, that can be scaled up into mainstream healthcare, are required. Future management guidelines should consider the heterogeneity of MAFLD and specialised models of care that coordinate the health workforce to manage the increased and growing MAFLD population.

URL: https://link.springer.com/article/10.1007/s12072-024-10663-9

Title: Adverse events with endoscopic ultrasound-guided gastroenterostomy for gastric outlet obstruction- A systematic review and meta-analysis

Author: Giri S., Harindranath S., Mohan B.P., Jearth V., Varghese J., Kozyk M., Kale A., Sundaram S.

Details: May 2024

Abstract: Background: The technical and clinical effectiveness of endoscopic ultrasonography (EUS)-guided gastroenterostomy (GE) has been reported by several meta-analyses, but few of them have addressed the adverse events (AE). The goal of the current meta-analysis was to analyze the AEs associated with various types of EUS-GE. Methods: All relevant studies reporting the AEs with EUS-GE were searched from 2000 to 31st March 2023 in MEDLINE, Embase, and Scopus. The event rates were pooled using a random effects model. Results: A total of 36 studies (n = 1846) were included in the meta-analysis. The present meta-analysis reports a pooled technical success rate of 96.9% (95.9-98.0; I-2 = 29.3%) with a pooled clinical success rate of 90.6% (88.5-92.7; I-2 = 60.9%). The pooled incidence of overall AEs with EUS-GE was 13.0% (10.3-15.7; I-2 = 69.7%), with the commonest being maldeployment of the stent, seen in 4.6% (3.2-6.0; I-2 = 50.6%). The pooled incidences of serious AE and procedure-related mortality were 1.2% (0.7-1.8; I-2 = 1.9%) and 0.3% (0.0-0.7; I-2 = 0.0%), respectively. Subgroup analysis of studies using only the free-hand technique showed a significantly lower overall AE and maldeployment but not serious AE and other individual AEs. The pooled incidences of delayed stent migration and stent occlusion were 0.5% (0.0-1.1; I-2 = 0.0%) and 0.8% (0.2-1.3; I-2 = 0.0%), respectively. Conclusion: Despite a technical and clinical success rate of >90%, AEs are seen in around one-seventh of the cases of EUS-GE, maldeployment being the commonest. However, the pooled incidence of serious AE and mortality remains low, which is reassuring.

URL: https://onlinelibrary.wiley.com/doi/10.1002/ueg2.12576

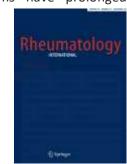**Journal Name**: **Rheumatology International**   IF: 3.2

Title: Diagnostic delays in systemic vasculitides

Author: Auanassova A., Yessirkepov M., Zimba O., Ahmed S., Mruthyunjaya P.

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Abstract: Systemic vasculitides are among the less common disorders encountered in routine rheumatology practice. The low incidence and heterogeneous presentation at onset can potentially lead to delayed diagnosis. Not recognizing these in the early phase may prove detrimental, as some vasculitis may progress to a catastrophic course with major morbidity or mortality. The causes of diagnostic delay may vary among different types of vasculitis and may also be disease-, patient-, or physician-related. Disease-related factors include the myriad presentations with diverse and non-specific symptoms, mimicking other conditions like infections. In addition, some forms have prolonged prodromal phases before evident organ damage. Limited awareness among healthcare professionals, particularly outside rheumatology, and a lack of readily available diagnostic tools contribute to missed diagnoses. Delays in seeking care due to non-specific symptoms or lack of access to specialist care can worsen outcomes. The economic burden also increases with delayed diagnosis and damage accrual when the disease remains unrecognized or untreated for prolonged periods. Although the causes of vasculitis are numerous, including secondary causes, in this review, we focus on diagnostic delays in primary vasculitides and suggest potential steps to identify and treat these diseases early. These include educating both healthcare professionals and the public about the signs and symptoms of vasculitis; expanding the rheumatology workforce and facilitating timely referrals; implementing readily available and reliable tests for early detection; and streamlining care and diagnostic pathways. Such measures have the potential to improve the overall outcomes of the disease, with prolonged remission, minimal damage accrual, and improved quality of life.

URL: https://link.springer.com/article/10.1007/s00296-024-05582-9

Title: Correlates of breakthrough COVID-19 in vaccinated patients with systemic sclerosis: survival analysis from a multicentre international patient-reported survey

Author: Ahmed S., Gupta L., Kuwana M., Pauling J.D., Day J., Ravichandran N., Joshi M., Parodis I., Sen P., Jagtap K., Nikiphorou E., Saha S., et al.

Abstract: This study aimed to assess the incidence, predictors, and outcomes of breakthrough infection (BI) following coronavirus disease (COVID-19) vaccination in patients with systemic sclerosis (SSc), a risk group associated with an immune-suppressed state and high cardiopulmonary disease burden. Cross-sectional data from fully vaccinated respondents with SSc, non-SSc autoimmune rheumatic diseases (AIRDs), and healthy controls (HCs) were extracted from the COVAD database, an international self-reported online survey. BI was defined according to the Centre for Disease Control definition. Infection-free survival was compared between the groups using Kaplan–Meier curves with log-rank tests. Cox proportional regression was used to assess the association between BI and age, sex, ethnicity, and immunosuppressive drugs at the time of vaccination. The severity of BI in terms of hospitalization and requirement for oxygen supplementation was compared between groups. Of 10,900 respondents, 6836 fulfilled the following inclusion criteria: 427 SSc, 2934 other AIRDs, and 3475 HCs. BI were reported in 6.3% of SSc, 6.9% of non-SSc AIRD, and 16.1% of HCs during a median follow-up of 100 (IQR: 60–137) days. SSc had a lower risk for BI than HC [hazard ratio (HR): 0.56 (95% CI 0.46–0.74)]. BIs were associated with age [HR: 0.98 (0.97–0.98)] but not ethnicity or immunosuppressive drugs at the time of vaccination. Patients with SSc were more likely to have asymptomatic COVID-19, but symptomatic patients reported more breathlessness. Hospitalization [SSc: 4 (14.8%), HCs: 37 (6.6%), non-SSc AIRDs: 32(15.8%)] and the need for oxygenation [SSc: 1 (25%); HC: 17 (45.9%); non-SSc AIRD: 13 (40.6%)] were similar between the groups. The incidence of BI in SSc was lower than that in HCs but comparable to that in non-SSc AIRDs. The severity of BI did not differ between the groups. Advancing age, but not ethnicity or immunosuppressive medication use, was associated with BIs.

URL: https://link.springer.com/article/10.1007/s00296-023-05433-z

Title: SARS-CoV-2 seroprevalence in patients with autoimmune rheumatic diseases versus family controls: a multi-city cross-sectional survey

Author: Misra R., Bhattacharya D., Ahmed S., Amin S., Shobha V., Ghosh A., Pandya S.C., Parai D., Padhan P., Priyadarshini S., Mohapatra I., Patro A.R.K., Mohanty A.P., Pati S.

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Abstract: There is uncertainty regarding the effect of the SARS-CoV-2 infection on patients with autoimmune rheumatic diseases (AIRD) who are on immunosuppressive drugs. We did a multicity cross-sectional seroprevalence study conducted in five different cities in India before COVID-19 immunization. Patients with a diagnosis of AIRD and DMARDs were included. Relatives of the patients, preferably staying in the same household with no known rheumatic diseases served as controls. Serum IgG antibodies to SARS-CoV-2 Receptor Binding Domain (RBD) of the spike protein and nucleoprotein (NP) were assayed in eight hundred and eighty nine sera (subjects with disease = 379 and in subjects without disease = 510). IgG antibodies to either RBD and/or NP were positive in 135 (36%) subjects with AIRD as compared to 196 (38%) controls. The seroprevalence of anti-RBD and anti-NP varied between different cities but was not significantly different between subjects with and without disease in Mumbai, Ahmedabad, Bengaluru and Bhubaneswar. However, the occurrence of IgG antibodies to RBD was significantly ($p < 0.05$) lower in subjects with disease (28/65;43%) as compared to subjects without disease (42/65;65%) in Kolkata, where the positivity rate was lower in connective tissue disease group than in inflammatory arthritis group. Overall, patients with rheumatic diseases on DMARDs have IgG antibodies to RBD and NP of SARSCoV-2 at a comparable level with that of subjects without disease, but the level of antibodies to RBD is lower in patients with connective tissue disease on immunosuppressive drugs in one centre.

URL: https://link.springer.com/article/10.1007/s00296-023-05489-x