Conclusions: Short term adherence to WATs was high in published studies of LPB, OA or CIRDs but the efficacy to increase physical activity levels was small to moderate. There were no modifications of symptoms. The incorporation of WAT in patient care remains challenging. Further studies are needed, especially for CIRDs.

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THU0746-HPR EFFICACY OF SURGICAL TREATMENTS FOR PAIN ASSOCIATED WITH TRAPEZIOMETACARPAL (THUMB BASE) OSTEOARTHRITIS: A SYSTEMATIC REVIEW

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Background: Trapeziometacarpal osteoarthritis (TMO) is a highly prevalent, painful, and debilitating disorder. Unfortunately, TMO management remains sub-optimal and this is in part due to the lack of knowledge on evidence-based care management. The aim of this systematic review (SR) is to document the efficacy of existing surgical interventions for reducing TMO pain.

Methods: We performed this SR according to the Cochrane intervention review methodology. Trials and SRs assessing surgical intervention efficacy on TMO were identified via 16 databases and hand search via the included references. Studies selection, data extraction and methodological quality assessment were conducted by two independent reviewers. Effect estimates of interventions were extracted from SRs when available, otherwise estimated from randomised controlled trials (RCTs). If RCTs were not available, non-RCTs (NRCTs) were referred to. Characteristics and efficacy of interventions were quantitatively analysed. In addition, we rated the level of evidence quality by using the GRADE tool.

Results: A total of 8 SRs, 16 RCTs and 41 NRCTs were identified. Most of these studies had unclear to high risk of biases which may have compromised their results. More than 40 comparisons of different surgical interventions were identified, including arthroscopic debridement (AD) (n=2 studies); 1 st metacarpal osteotomy (n=3); resection of 1 st metacarpal/trapezium (R) (n=3); arthrodesis (A) (n=14); trapeziectomy (T) (n=16); hematoma distraction arthroplasty (n=5); ligament reconstruction (LR) (n=5); tendon interposition (TI) (n=13); LRTI (n=17); and manufactured implants - Arex (n=1), Artelon (n=7), chondrocostal autograft (n=4), De la Caffinière (n=5), Elektra (n=5), Graftjacket (n=1), Gore-Tex (n=6), Guepar (n=3), Ledoux (n=2), Maia (n=1), Marlex (n=5), porcine dermal collagen xenograft (n=2), pyrocarbon Pi₂ (n=5), PyroDisk (n=1), Pyrocordan (n=1), and Swanson (n=11). The effect sizes of most of the interventions were small (standardised mean differences 0.04–4.81, risk ratios 1.05–11.1) and/or their 95% confidence intervals included null value. Nonetheless, the superiority of the following interventions was supported by the evidence of very low to moderate quality: AD

over conservative interventions; R+GraftJacket over R; A over R, T+TI and T +LRTI; partial T+chondrocostal autograft over T; T over T+porcine xenograft; T +TI over Artelon; T+LRTI+ bone tunnel over T+LRTI without tunnel for a short-term period; T+LRTI over T+LRTI+ Mitek anchor suture; T+Elektra over T+TI; PyroDisk over Pyrocordan.

Conclusions: This SR allowed collating comprehensive evidence on the efficacy of surgical interventions for TMO pain. Based on the available scientific evidence, arthrodesis appears superior to other interventions (R, T+TI and T+LRTI) to alleviate pain, however, adverse effects (e.g., nonunion) have been reported. Thus, it goes without saying that when choosing a proper surgical intervention for TMO, not only its analgesic effects but also the risk and gravity of adverse effects must be taken into consideration.

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THU0747-HPR THE EFFECT OF CLINICAL PILATES EXERCISES ON DISEASE SPECIFIC INDICES, CORE STABILISATION AND BALANCE IN PATIENTS WITH ANKYLOSING SPONDYLITIS

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Background: The Pilates method has been widely used to improve physical fitness and rehabilitation in general. Although Pilates method gives precedence to the spine and focuses on controlled movement, posture, and breathing, which are obviously the basic goals of Ankylosing Spondylitis(AS) treatment there is limited literature on the effectiveness of the Pilates method as treatment for patients with AS.

Objectives: The aim of this study was to investigate the efficacy of clinical pilates exercises on on disease-specific indices, core stabilisation and balance in patients with AS.

Methods: The study included 21 AS patients(11 male, 10 female). Demographic and physical characteristics(age, height, weight, body mass index) were recorded. Evaluations were performed before clinical pilates treatment and after 8 weeks clinical pilates treatment. Bath Ankylosing Spondylitis Disease Activity Index(BASDAI) for disease activity, Bath Ankylosing Spondylitis Functional Index (BASFI) for functional capacity, Bath Ankylosing Spondylitis Mobility Index (BASMI) for spinal mobility were used. Balance was evaluated with Biodex Balance System SD. Overall postural stability indices obtained with bilateral stance (stable and unstable platform), single leg stance(stable platform) and overall limits of stability scores were recorded. Static and dynamic endurance tests were used to evaluate core stabilisation. Modified sit-ups test for dynamic core endurance and static core endurance tests recommended by McGill were used to evaluate core stabilisation. Patients attended group clinical pilates exercise sessions three times a week, during 8 weeks with physiotherapist.

Results: The mean age of patients was 43.9±8.93 years and the mean body mass index(BMI) was 27.37±3.68 kg/m². Pre and post treatment measurements were shown in table 1. Statistically significant improvement were observed in all parameters except stable platform bilateral stance and single leg stance postural stability results(p<0,05).

Abstract THU0747HPR – Table 1. Comparison of pre and post treatment measurements

	Pre-Treatment Median(IQR)	Post Treatment Median(IQR)	p value
BASDAI	1,70 ^(1,01–3,27)	0,8 (0,56–1,75)	0,000*
BASFI	1,8 (0,35–3,13)	1 (0–1,83)	0,001*
BASMI	2,4 (1–3,7)	2 (0,7–3,1)	0,002*
Flexor endurance(s)	30,0 (20,5–60,35)	54,50 ^(42,85–86,00)	0,000*
Extensor endurance(s)	44,6 (20,75–63,00)	76,5 (54,25–91,77)	0,000*
Lateral side bridge(right)(s)	39 ^(21,86–60,00)	59,00 ^(43,61–80,00)	0,000*
Lateral Side Bridge(Left)(s)	42,40 ^(27,35–55,90)	65 ^(34,65–89,00)	0,001*
Sit-up test(reps)	16 ^(3,50–25,50)	20 ^(13–26,50)	0,001*
Bilateral stance (stabil)	0,30 (0,2–0,45)	0,3 (0,2–0,40)	0,907
Bilateral stance (unstabil)	1,5 (1,25–2,10)	1,40 ^(1,10–1,75)	0,007*
Single leg stance(Right)	0,7 (0,6–0,95)	0,7 (0,6–0,85)	0,298
Single leg stance(left)	0,7 (0,6–1,05)	0,7 (0,6–0,80)	0,463
LOS (overall)	51 ^(46–62)	64 ^(52,5–70,5)	0,007*

Mann Whitney U test. IQR: Interquartile Range

Conclusions: Clinical pilates exercises is beneficial and safety method in patients with AS to improve functional capacity, disease activity, spinal mobility, core stabilisation and balance. Clinical pilates is an enjoyable and effective way to exercise for Ankylosing Spondylitis patients.

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THU0748-HPR EVALUATION OF ADHERENCE TO BIOLOGIC DISEASE MODIFYING ANTI-RHEUMATIC DRUGS IN PATIENTS WITH INFLAMMATORY ARTHRITIS

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Background: In recent years, bDMARDs have revolutionised IA treatment in improving IA symptoms, as well as slowing down structural damage. However, efficacy observed in the controlled settings of clinical trials may not always translate to effectiveness in clinical practice.^{1 2} Currently, there are no published studies assessing adherence to bDMARDs and its associated factors among IA patients in Singapore. Knowledge of the extent of poor adherence to bDMARDs and its risk factors can facilitate efficient implementation of interventions to improve adherence and IA outcomes.

Objectives: The primary objective of the study was to assess adherence to bDMARDs among patients with IA in Singapore. The secondary objective was to identify factors associated with poor adherence to bDMARDs.

Methods: A retrospective observational study was conducted at Singapore General Hospital, a 1600-bed academic medical centre. Electronic records of patients diagnosed with rheumatoid arthritis (RA), spondyloarthritis (SpA) or psoriatic arthritis (PsA) who had received at least six consecutive months of bDMARDs between 1 st January 2010 and 31 st December 2015 were reviewed. Adherence was calculated by proportion of days covered (PDC) using the following formula: $PDC = \frac{\sum (\text{number of doses} \times \text{prescribed frequency})}{(\text{total duration}) \times 100\%}$. Patients with $PDC \geq 0.80$ were considered adherent.³ Factors associated with adherence to bDMARDs were identified using multivariate logistic regression using the entire dataset and then by type of IA.

Results: Among 115 patients included in the analyses, majority of the patients were Chinese (n=77, 67%) and females (n=61, 53%). Other pertinent demographics and clinical characteristics are detailed in table 1. The mean PDC was 0.82 (± 0.18) and 69 (60%) patients were adherent (i.e. $PDC \geq 0.8$). Multivariate logistic regression did not identify any factors significantly associated with adherence. Patients with SpA who previously received a bDMARD (OR=5.12; 95% CI 1.02–25.8; $p=0.048$) and who did not receive subsidy (OR=0.21; 95% CI 0.50–0.89; $p=0.034$) were found to be significantly associated with adherence.

Abstract THU0748HPR – Table 1. Patient demographics and clinical characteristics

Characteristics (n=115)		n, (%) unless indicated
Mean age at bDMARD initiation, years ($\pm$ SD)		45.5 (± 12.0)
Gender		
	Male	54 (47.0)
	Female	61 (53.0)
Race		
	Chinese	77 (67.0)
	Indian	17 (14.8)
	Malay	9 (7.8)
	Others	12 (10.4)
Diagnosis		
	RA	45 (39.0)
	SpA	44 (38.0)
	PsA	26 (23.0)
Biologic Naïve		
	Yes	79 (68.7)
	No	36 (31.3)
Current Biologic		
	TNFi	101 (87.8)
	Non-TNFi	14 (12.2)

Conclusions: The findings of this study suggest that IA patients have suboptimal adherence to bDMARDs. Determinants of poor adherence remain elusive and further research into the social, psychological and environmental aspects is warranted. Measures to improve affordability of bDMARDs such as obtaining government subsidies and offering patient access schemes may improve adherence as seen in patients with SpA.

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HPR Patients' perspectives, functioning and health (descriptive: qualitative or quantitative)

FRI0702-HPR TREATMENT SATISFACTION IN PATIENTS WITH JUVENILE IDIOPATHIC ARTHRITIS

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Background: Limited information exists regarding treatment satisfaction in patients with Juvenile Idiopathic Arthritis (JIA).

Objectives: The aim of this study was to investigate satisfaction with synthetic and biologic disease-modifying anti-rheumatic drugs (sDMARDs and bDMARDs) in adults with JIA.

Methods: Patients with JIA who attended Oslo University Hospital from 1995–2000 with <18 months disease duration were invited to participate. From a cohort of 96 patients, 52 (54%) used DMARDs. Patients treated with Methotrexate (MTX) or biologics were assessed with the 14-item Treatment Satisfaction Questionnaire for Medication (TSQM, one questionnaire for each medication). The TSQM covers 4 domains (effectiveness, side effects, convenience and global satisfaction) with a score range from 0 – 100 and with higher score representing higher satisfaction on the domain.

Results: The mean age of the 52 participants was 25.1 (4.6) years, 75% were female and 33 (63%) patients had polyarticular course JIA. The following DMARDs were used; MTX (n=29), biologics [n=37 (etanercept, n=13; adalimumab, n=8; tocilizumab, n=6; infliximab, n=3; certolizumab, n=3; golimumab, n=2; anakinra, n=1 and rituximab, n=1)] and sulfasalazine (n=5). 19 patients used a combination of sDMARDs and bDMARDs or 2 sDMARDs.

Clinical characteristics	All patients (N=96)	Patients on DMARDs (n=52)
Disease duration, years, mean (SD)	18.9 (1.5)	18.7 (1.6)
Age at disease onset, years, mean (SD)	6.1 (4.0)	6.3 (4.4)
ILAR classification, n (%)		
Systemic arthritis	7 (7)	2 (4)
Polyarticular RF negative	24 (25)	16 (31)
Polyarticular RF positive	1 (1)	1 (2)
Oligoarticular persistent	36 (38)	13 (25)
Oligoarticular extended	10 (10)	7 (13)
Enthesitis-related arthritis	5 (5)	2 (4)
Psoriatic arthritis	4 (4)	4 (8)
Undifferentiated arthritis	9 (9)	7 (13)

TSQM domains, mean (SD)	MTX (n=29)	Biologics (n=37)	P-value
Effectiveness	59.8 (19.6)	74.2 (15.5)	0.002
Side effects	62.3 (30.1)	90.1 (20.5)	<0.001
Convenience	64.3 (22.1)	69.1 (13.3)	0.282
Global satisfaction	48.5 (23.1)	70.4 (18.9)	<0.001

A correlation was found between the domain side effects and age in patients using MTX (rs 0.368, $p=0.049$). No other associations were found between TSQM domains and age, gender, disease duration or polyarticular disease course.

Conclusions: Patients reported higher treatment satisfaction with biologics compared to MTX in the domains effectiveness, side effects and global satisfaction. An association was found between age and the TSQM domain side effects in patients using MTX. Other domains of TSQM were not related to patient or disease characteristics in JIA. In order to ensure good health care, information of patients' treatment satisfaction should be incorporated in the process of treatment decision-making.

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