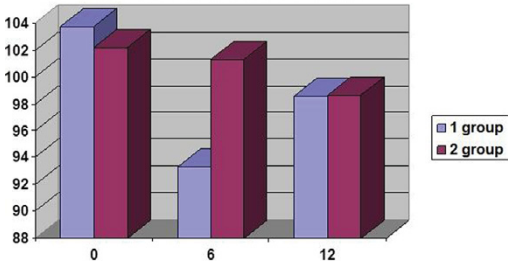
life. Obesity is considered to be associated with the incidence and progression of OA, thus weight loss is of paramount importance in OA management.
Objectives: To evaluate the efficacy of pharmacological and non-pharmacological therapy of obesity in pts with knee OA.
Methods: The study included 50 female pts aged 45–65 years with knee OA, Kellgren-Lawrence stage II-III, and obesity (BMI>30kg//m^2). Pts form Group 1 (n=25) were administered orlistat at 120 mg x 3times a day for 6 month alongside with low-caloric diet and therapeutic physical exercise. Pts from Group 2 (n=25) adhered to life-modifying therapy only, i.e. low-caloric diet and therapeutic physical exercise for 6 month. Anthropometry data (height, body weight, BMI), as well as WOMAC and quality of life EQ-5D scores were assessed at baseline, at 6 and 12 months (i.e, 6 months after discontinuation of therapy) after initiation of treatment in all pts.
Results: After 6 months of pharmacological therapy pts from Group 1 achieved significant mean weight loss by 10,07% (p<0,05), while pts from Group 2 with non-pharmacological therapy demonstrated only <1% (0,84%) (p>0,05) weight loss. Pts receiving pharmacological therapy with orlistat demonstrated the following improvements by WOMAC subscales: pain reduction by 52,5% (p<0,05), stiffness reduction by 47,98% (p<0,05), and 51,55% function improvement, while total WOMAC score improved by 51,49% (p<0,05). Respective WOMAC subscale scores in pts from Group 2 were considerably less impressive vs Group 1. Pts from Group 1 demonstrated statistically significant improvement in the quality of life by 52,27% EQ-5D (p<0,05). EQ-5D score remained unchanged only in 2 pts from Group 1 who failed to lose weight. During the following 6 months after discontinuation of orlistat pts from Group 1 regained 5,6% of their body weight (p<0,05) (Fig.1), which was associated with OA worsening OA (deterioration of pain by 42,63% (p<0,05) WOMAC, and total WOMAC score decrease by 23,15%). After 12 months of follow up pts from Group 2 showed body weight loss by 3,5%, and continuing decrease of pain in knee joints by WOMAC pain subscale, reaching 22,3% (p<0,05) as compared to baseline.

Fig 1. Body weight dynamics during the study



Conclusions: The results of our study demonstrate significant >10% weight loss in OA pts induced by orlistat therapy. Such a noticeable weight loss was associated with reduced pain intensity, improved function and quality of life in OA pts. Partial regain of body weight during 6 months after discontinuation of orlistat was accompanied by worsening of OA clinical course. Thus, effective maintenance of optimal body weight in OA pts requires longer pharmacotherapy of obesity.
Disclosure of Interest: None declared
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SAT0511 THUMB BASE OSTEOARTHRITIS: ASSOCIATIONS BETWEEN SYNOVITIS ON ULTRASOUND AND PAIN

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Background: Hand osteoarthritis (OA) affects the interphalangeal (IP) joints but also the first carpometacarpal (CMC1) joint in the thumb base. Previous ultrasonography (US) studies of the IP joints have shown that inflammatory and structural features are frequently present and associated with clinical signs and symptoms. Until now, US studies specifically assessing the CMC1 joint have not been performed.
Objectives: To investigate associations between inflammatory features, structural damage and pain in CMC1 OA.
Methods: Cross-sectional data of 87 hand OA patients participating in the EChography in Hand OA (n=63) and the Etanercept in Hand OA (n=24) study at the Leiden University Medical Center were used in this analysis. Both CMC1 joints were assessed with US for synovial thickening, effusion and power Doppler signal (PDS) on a 0–3 scale by experienced ultrasonographers. Presence of pain upon palpation of the thumb base was assessed by trained research nurses on the same day as the US. Hand radiographs were scored blinded for clinical and US features, according to the Osteoarthritis Research Society International atlas for osteophytes (0–3), joint space narrowing (JSN, 0–3), sclerosis (0–1) and malalignment (0–1) in the CMC1 joint. Risk ratios (RRs) with 95% confidence intervals (CIs) were calculated using generalized estimating equations to investigate associations between US or radiographic features and thumb base pain on joint level.
Results: Of 87 patients (mean age 60.3 years, 82% women, mean BMI 27.2 kg/m^2) 174 CMC1 joints were assessed, of which 54 (31%) were painful. The US features synovial thickening, effusion and PDS were found in 26%, 33% and 25% of the joints, respectively. Radiographic features were present in 55% (osteophytes), 79% (JSN), 20% (sclerosis) and 12% (malalignment) of the joints. No associations were seen between inflammatory US features and pain upon palpation of the thumb base (Table). However, osteophytes and sclerosis were associated with more pain (RR 2.5 [95% CI 1.4 to 4.6] for osteophytes grade 3 versus no osteophytes, and RR 2.0 [95% CI 1.3 to 3.2] for presence of sclerosis). Other radiographic features (JSN, malalignment) showed a trend for increased risk of pain on palpation, and for osteophytes and JSN a dose-response relation was apparent.

Table. Associations of US and radiographic features with pain on palpation in thumb base OA (n=171 joints*)

	Tenderness yes/no, n	RR (95% CI)
US features		
Synovial thickening		
Absent	40/85	1
Grade 1	10/22	1.1 (0.6-1.8)
Grade 2/3	4/10	0.9 (0.4-2.4)
Effusion		
Absent	35/79	1
Grade 1	13/25	0.8 (0.4-1.5)
Grade 2/3	6/13	0.8 (0.3-2.0)
Power doppler signal		
Absent	41/86	1
Grade 1	8/24	0.9 (0.5-1.6)
Grade 2/3	5/7	1.2 (0.7-2.0)
Radiographic features		
Osteophytes		
Absent	18/58	1
Grade 1	16/40	1.2 (0.7-2.2)
Grade 2	11/13	1.5 (0.7-2.9)
Grade 3	9/6	2.5 (1.4-4.6)
Joint space narrowing		
Absent	8/27	1
Grade 1	36/77	1.6 (0.8-3.3)
Grade 2	7/9	2.1 (0.8-5.3)
Grade 3	3/4	2.5 (0.9-7.0)
Sclerosis		
Absent	38/104	1
Present	16/13	2.0 (1.3-3.2)
Malalignment		
Absent	44/107	1
Present	10/10	1.4 (0.7-2.7)

*3 joints no information on tenderness. CI, confidence interval; n, number; OA, osteoarthritis; RR, risk ratio; US, ultrasound.

Conclusions: Radiographic features, especially osteophytes and JSN, were prevalent and more frequently present than US inflammatory features in the CMC1 joints of hand OA patients. In contrast to what is known from studies in IP joints, the presence of inflammatory US features was not associated with pain in the thumb base, but structural damage was. These results suggest differences in etiology of pain in thumb base compared to IP OA, with a larger role for structural damage in thumb base OA.
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SAT0512 MRI PROVIDING INSIGHTS IN ASSOCIATION OF SYNOVITIS AND BONE MARROW LESIONS (BMLS) WITH PAIN IN THUMB BASE OSTEOARTHRITIS (OA)

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Background: Hand OA affects the interphalangeal (IP) and thumb base joints (first carpometacarpal [CMC1] and scaphotrapeziotrapezoid [STT]). Much is still unknown about the pathophysiology of thumb base OA. Magnetic resonance imaging (MRI) studies have led to new insights in IP OA, but in absence of a scoring system thumb base MRI studies are lacking.
Objectives: Investigate the prevalence of MRI synovitis and BMLs in the thumb base, and their association with pain, using the novel OMERACT thumb base OA MRI scoring system (TOMS)[1].
Methods: Cross-sectional data of the Hand OSTeoArthritis in Secondary care (HOSTAS) study, including consecutive patients diagnosed by their treating rheumatologist with primary hand OA, were used. Patients with an MRI of the right thumb base at baseline were included in the analysis. MRIs were scored by two readers using the TOMS for synovitis and bone marrow lesions (BMLs) in the CMC1 and STT joints (grade 0–3). BMLs were evaluated in the proximal and distal joint parts separately, resulting in a 0–6 and 0–9 sum score for CMC1 and STT, respectively. Pain on palpation of the thumb base was assessed by trained research nurses. Hand radiographs were assessed for presence of osteophytes in the CMC1 and STT joints. Associations between MRI lesions and thumb base tenderness were analysed using logistic regression, presented as odds ratios (ORs) with 95% confidence intervals (CIs), stratified for absence or presence of radiographic osteophytes. For the analyses synovitis and BML scores were