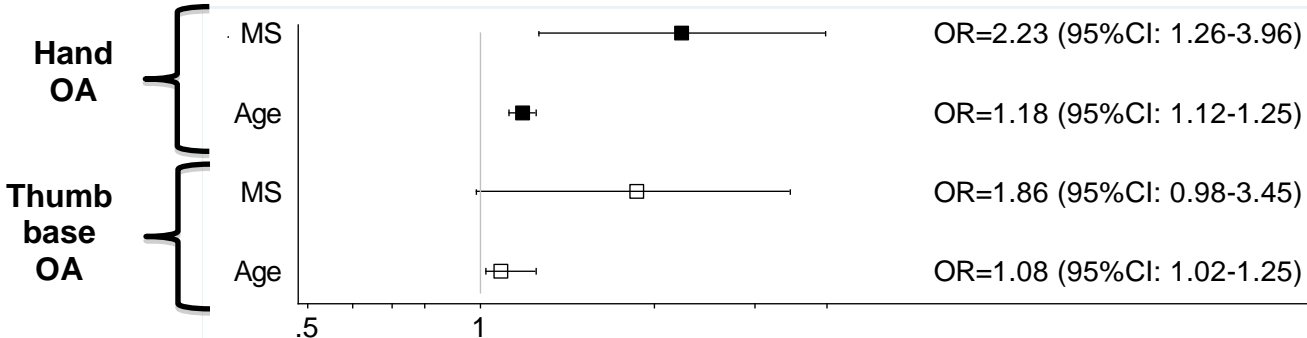


Supplemental materials

Table 1: definition of metabolic syndrome according to International Diabetes Federation (IDF) criteria

| |
|---|
| Central obesity (defined as waist circumference ≥ 94 and 80 cm for European men and women, respectively, or with ethnicity specific values for other groups) |
| plus any two of the following four factors: i) triglycerides level ≥ 1.7 mmol/L, or specific treatment for this lipid abnormality, ii) high-density lipoprotein cholesterol < 1 mmol/L in males and < 1.3 mmol/L in females, or specific treatment for this lipid abnormality, iii) increased blood pressure (BP) with systolic BP ≥ 130 or diastolic BP ≥ 85 mm Hg, or treatment of previously diagnosed hypertension, iv) increased fasting plasma glucose ≥ 100 mg/dL (5.6 mmol/L), or previously diagnosed type 2 diabetes |

Figure 1: risk factors associated with hand and thumb base osteoarthritis



Black squares: Hand osteoarthritis; White squares: thumb base osteoarthritis. OR: odds ratio, 95% CI: 95% confidence interval. MS: metabolic syndrome (presence or absence). Age (per year); OA: osteoarthritis

Table 2. Determinants of structural severity of radiographic hand osteoarthritis (OA) in the METAFIB-OA study group

| | Severity | Univariate p-value | β^3 | Multivariate p-value |
|--|-------------|--------------------|-----------|----------------------|
| Sum of KL score | | | | |
| Age (per year) ¹ | $\rho=0.31$ | 10^{-5} | 0.43 | <0.0001 |
| MetS(mean, SD) ² | | | | |
| No | 3.7 (6.11) | 0.002 | 2.10 | 0.04 |
| Yes | 6.7 (10.7) | | | |
| No. of affected joints with hand OA | | | | |
| Age (per year) ¹ | $\rho=0.32$ | 10^{-5} | 0.43 | <0.0001 |
| MetS(mean, SD) ² | | | | |
| No | 1.8 (2.97) | 0.002 | 1.02 | 0.04 |
| Yes | 3.2 (4.93) | | | |

¹ ρ coefficient for Pearson correlation. ²Wilcoxon rank-sum test comparing means.

³ β coefficient of multiple linear regression.

HOA+: Hand osteoarthritis presence, HOA-: Hand osteoarthritis absence

KL: Kellgren-Lawrence score, MetS: metabolic syndrome

Table 3: Risk factors for radiographic thumb-base (TB) OA

| Variable | TB OA Diagnosis | | | Univariate analysis | | |
|---|------------------|-------------------|---------------|---------------------|-------------|--------------|
| | TB OA+ (n=61) | TB OA- (n=240) | P value | OR | 95%CI | P value |
| Socio-demographic variables | | | | | | |
| Age (years), mean (SD) | 55.3 (5,9) | 52.9 (4,9) | 0.0008 | 1.10 | (1.04-1.17) | 0.001 |
| Male gender, n (%) | 55 (90.2) | 210 (87.5) | 0.4 | | | |
| Previous hand trauma, n (%) | | | | | | |
| HIV characteristics | | | | | | |
| Duration of HIV infection (years), mean (SD) | 18.5 (7.7) | 17.5 (7.2) | 0.4 | | | |
| CD4 level (/mm ³), mean (SD) | 593 (257) | 631 (268) | 0.4 | | | |
| Undetectable us HIV viral load, n (%) (n=290) | 36 (59) | 136 (59.4) | 0.5 | | | |
| Duration of exposure to protease inhibitors (months), mean (SD) | 25.2 (32.3) | 27.6 (32.3) | 0.6 | | | |
| Metabolic variables | | | | | | |
| Waist circumference (cm), mean (SD) | 93.1 (9.9) | 92.3 (11.0) | 0.6 | | | |
| Obesity (BMI≥30), n (%) | 6 (9,8) | 26 (10.8) | 0.5 | | | |
| Hypertension, n (%) | 10 (16,4) | 55 (22,9) | 0,2 | | | |
| Triglycerides (mmol/l), mean (SD) | 2.04 (1.4) | 1.93 (2.02) | 0.7 | | | |
| HDL-cholesterol (mmol/l), mean (SD) | 1.19 (0.34) | 1.21 (0.39) | 0.7 | | | |
| HOMA score, mean (SD)(n=297) | 2.40 (2.9) | 2.5 (2.5) | 0.8 | | | |
| Diabetes, n (%) | 14 (22,9) | 42 (17,5) | 0,3 | | | |
| MetS, n (%) | 10 (16.4) | 55 (22.9) | 0.2 | 1.86 | (0.98-3.45) | 0.06 |

Data are number (%) or mean (SD). Radiographic TB OA definition was presence of ≥ 1 affected joint with a KL score ≥2.

Table 4. Association between plasma biomarkers and radiographic hand OA

| | Radiographic hand OA | | | Univariate analysis | | Multivariate |
|--------------------------|----------------------|-------------------|-------------|---------------------|-------------|----------------|
| | OA (n=169) | Non-OA (n=127) | P value | OR (95% CI) | P value | OR (95% CI) |
| hsCRP | 3.64 (5.35) | 2.72 (3.12) | 0.6 | | | |
| sCD14 | 2203.8 (915.6) | 2010.8 (897.9) | 0.02 | 4.9 (1.1-21.6) | 0.03 | 3.9 (0.9-17.2) |
| sCD163 | 721.4 (324.6) | 710.4 (299.1) | 0.9 | | | |
| Leptin | 9.38 (21.1) | 8.54 (13.7) | 0.2 | | | |
| Total adiponectin | 4.39 (3.0) | 4.34 (2.7) | 0.8 | | | |
| HMW adiponectin | 2.11 (2.05) | 2.07 (1.84) | 0.8 | | | |
| Leptin/adiponectin ratio | 2.72 (5.07) | 2.65 (4.75) | 0.2 | | | |
| IL-6 | 2.35 (5.0) | 1.74 (1.46) | 0.6 | | | |

Abbreviations: hsCRP: high-sensitivity C-reactive protein. HMW: high molecular weight. IL-6: interleukin 6

All data are mean (SD).

¹Adjusted for presence of MetS