Methods: We retrospectively evaluated consecutive patients admitted to our department from January 2006 to October 2021 whose C7-HRP antigen were measured. We collected their age, sex, primary problem and its lesion, and test results within 3 months before C7-HRP measurement. We also investigated the use of immunosuppressants, and maximum and cumulative dose of administered prednisolone within 6 months before C7-HRP measurement. Maximum and cumulative dose of prednisolone contained methylprednisolone pulse, which was converted into prednisolone equivalent. We investigated the characteristics of CMV-positive and negative patients, and those of CMV-positive patients with or without anti-CMV therapy. Results: Of a total of 472 patients, 85 were positive and 387 were negative for C7-HRP. The average age was 71.2 ± 6.4 (p=0.0001). Their male-to-female ratio was 20/65 vs. 120/267 (p=0.0290). The following diseases were significantly common among CMV-positive patients: microscopic polyangiitis (21.2% vs. 3.9%, p<0.0001), adult-onset Still’s disease (7.1% vs. 1.3%, p=0.0002), and systemic sclerosis (4.7% vs. 2.1%, p=0.0273). Significantly common comorbidities of CMV-positive patients were interstitial lung disease (35.3% vs. 16.0%, p=0.0001), nephritis (23.5% vs. 11.6%, p=0.0005), peripheral nervous system disorders (11.8% vs. 5.7%, p=0.0070), alveolar hemorrhage (5.9% vs. 0.8%, p=0.0001), and peripheral circulatory disorders (4.7% vs. 1.6%, p=0.0111). Average neutrophil counts (7720 ± 4540 /μL, p=0.0001), serum creatinine (1.09 ± 0.96 mg/dL, p=0.0014), and hemoglobin A1c (6.3% ± 5.7%, p=0.0030) were significantly higher among CMV-positive patients, whereas hemoglobin (10.1 ± 11.1 g/dL, p=0.0001), lymphocyte counts (820 ± 1190 /μL, p=0.0001), platelet counts (233000 ± 259000 /μL, p=0.0001), and serum albumin (2.9 ± 3.4 g/dL, p=0.0001) were lower. Higher maximum dose of prednisolone (534.9 ± 135.5 mg/day, p=0.0001), intravenous immunoglobulin (271.1% vs. 11.4%, p<0.0001), rituximab (9.4% vs. 2.1%, p=0.0001), azathioprine (23.5% vs. 14.2%, p=0.0053), cyclosporin (8.2% vs. 3.6%, p=0.0010) were significantly more often used among CMV-positive patients. Average cumulative dose of prednisolone was 3022.6 mg vs. 1408.7 mg (p=0.0001). We also performed multivariate analysis, including the patients’ age, sex, maximum and cumulative dose of prednisolone, and the use of intravenous immunoglobulin, rituximab, azathioprine, and cyclosporin. Elderly (p=0.0006), female (p=0.0023), high cumulative dose of prednisolone (p=0.0155), and the use of cyclosporin (p=0.0479) were significantly associated with CMV-positivity. Anti-CMV drug was administered to 63.5% of CMV-positive patients. The average age was significantly higher in anti-CMV-drug-treated patients than untreated patients (73.7 vs. 67.1, p=0.0492). The CMV-treated patients had significantly higher neutrophil counts (8540 ± vs. 6280 /μL, p=0.0001), erythrocyte sedimentation rate (57.6 mm/h vs. 40.5 mm/h, p=0.0001), and C-reactive protein (5.3 mg/dL vs. 2.6 mg/dL, p=0.0001) than the untreated patients while the other data such as complete blood counts and serum chemistry revealed no significant difference. Average maximum dose of prednisolone was significantly higher in CMV-treated patients (617.1 mg/day vs. 391.1 mg/day, p=0.0261) while average cumulative dose of prednisolone and the use of any other immunosuppressants revealed no significant difference.

Conclusion: Intense immunosuppression, especially with higher dose of glucocorticoids, seemed to be the major risk factor of CMV reactivation. These medications may often require anti-CMV therapy.

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A. Singhi1, S. K. Das2, A. Chopra2, D. Danda3, B. J. Paul4, L. March5, A. J. Mathew4,6, P. Shenoy2, C. Gotay10, A. J. Palmer1, B. Antony1.1 University of Tasmania, Hobart, Tasmania, Australia, Menzies Institute for Medical Research, Hobart, Australia; 2Era’s University, Lucknow, India, Department of Rheumatology; 3University of British Columbia, Vancouver, BC Canada, School of Population and Public Health (SPPH), Vancouver, Canada; 4University of Sydney, Sydney, Australia; 5Centre for Arthritis & Rheumatism Excellence, Kochi, Kerala, India, Department of Rheumatology, Kochi, India; 6Apollo Jehangir Hospital, Pune University, Pune, India, Centre for Rheumatic Diseases, Pune, India; 7Christian Medical College, Vellore, India, Department of Clinical Immunology and Rheumatology, Vellore, India; 8KMCT Medical College, Calicut, Kerala, India, Department of General Medicine, Calicut, India; 9University of Sydney, Sydney, Australia, Institute of Bone and Joint Research, Kolling Institute of Medical Research, Sydney, Australia; 10University of Sydney Royal North Shore Hospital, St Leonards, Sydney, Australia, Florian and Cope Professorial Rheumatology Department, Sydney, Australia; 11Center for Rheumatology and Spine Diseases, Copenhagen University Hospital - Rigshospitalet Glostrup, Denmark, The Copenhagen Center for Arthritis Research (COPECARE), Glostrup, Denmark; 12Centre for Arthritis & Rheumatism Excellence, Kochi, Kerala, India, Department of Rheumatology, Kochi, India; 13The University of British Columbia, Vancouver, Canada, School of Population and Public Health (SPPH), Vancouver, Canada.

Background: Few studies have reported the burden of osteoarthritis (OA) in different parts of India. However, no study has reported the detailed estimates of incidence, prevalence, and years lived with disability (YLDs) and its trends for OA (and its various sites) across the states of India over a long period of time.

Methods: We used data from the Global Burden of Disease (GBD) study, which uses a comprehensive, multidisciplinary, and multidimensional approach to assess health outcomes and health systems across 195 countries and territories. We used the GBD 2019 burden of disease study to estimate the incidence, prevalence, and disability-adjusted life years (DALYs) of OA across the states of India by age, sex, and year from 1990 to 2019. We estimated the number of new cases (incidence), prevalent cases (prevalence), and DALYs of OA by age, sex, and year using data from the GBD study.

Results: The burden of OA across the states of India varied significantly from 1990 to 2019. The states with the highest burden of OA were Uttar Pradesh, Rajasthan, and Bihar, while the states with the lowest burden were Kerala, Tamil Nadu, and Maharashtra. The overall prevalence of OA in India increased from 1990 to 2019, with the highest increase observed in the elderly population. The disability-adjusted life years (DALYs) of OA also increased from 1990 to 2019, with the highest increase observed in the elderly population. The disability-adjusted life years (DALYs) of OA also increased from 1990 to 2019, with the highest increase observed in the elderly population.

Conclusion: The burden of OA is a major public health concern in India, with a significant increase in incidence, prevalence, and disability-adjusted life years (DALYs) from 1990 to 2019. Future studies should focus on identifying the underlying factors contributing to the burden of OA and developing strategies to improve the health of OA patients in India.