Göteborg, 2022

GOUT - EPIDEMIOLOGICAL STUDIES ON WORK OUTCOMES, AIRBORNE RISK FACTORS AND TREATMENT PATTERNS

AKADEMISK AVHANDLING

Som för avläggande av medicine doktorsexamen vid Sahlgrenska akademin, Göteborgs universitet kommer att offentligen försvaras i aulan (vån 3), Guldhedsgatan 10A, fredagen den 2 december 2022 klockan 13:00.

av Valgerður Rós Sigurðardóttir

Fakultetsopponent:
Professor Abhishek Abhishek
University of Nottingham, Storbritannien

Avhandlingen baseras på följande delarbeten

I. Sigurdardottir V, Svärd A, Jacobsson LTH, Dehlin M. Gout in Dalarna, Sweden – a population-based study of gout occurrence and compliance to treatment guidelines. Scand J Rheumatol. 2022; In press.

II. Sigurdardottir V, Drivelegka P, Svärd A, Jacobsson LTH, Dehlin M. Work disability in gout: a population-based case-control study. Ann Rheum Dis. 2018;77(3):399-404.

III. Sigurdardottir V, Jacobsson LTH, Schiöler L, Svärd A, Dehlin M, Toren K. Occupational exposure to inorganic dust and risk of gout: A population-based study. RMD Open. 2020;6(2).

IV. Sigurdardottir V, Svärd A, Jacobsson LTH, Molnar P, Barregård L, Segersson D, Stockfelt L, Dehlin M. Exposure to residential air pollution and risk of gout. Manuscript.

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Abstract

The overall aim of the thesis was to describe the contemporary epidemiology and use of urate-lowering therapy (ULT) for gout in the Swedish region of Dalarna, to describe the impact of the disease with regard to sickness absenteeism and to explore potential novel environmental and occupational-related risk factors for gout in the Western Swedish Healthcare Region.

All of the studies used prospectively registered healthcare-, socioeconomic-and administrative data, exploiting the possibility to link individual-level data from different sources with the unique personal identity number that all Swedish residents are given.

In Paper I the incidence rate of gout in Dalarna was 247 cases per 100 000 person-years in 2019, whereas the prevalence in 2018 was 2.45%. Substantial under-use of ULT was found, as 76% of prevalent cases had an indication for ULT, whereas only 24% received treatment. Minor improvements in quality-of-care indicators were demonstrated after the publication of national clinical gout management guidelines in 2016.

Paper II showed that patients with gout had 56% more sickness-absenteeism days than matched population controls and that gout was a predictor for new-onset sickness-absenteeism.

In Paper III we demonstrated a modest association between occupational exposure to inorganic dust and incident gout (odds ratio (OR) 1.12, 95% confidence interval (CI) 1.04 to 1.20).

In Paper IV, we found no association between long-term exposure to residential air pollution and incident gout.

In conclusion, gout is a common and poorly managed condition. Sickness absenteeism is increased among gout patients, which has economic consequences for both the affected individuals and society. Occupational exposure to inorganic dust might increase the risk of gout, whereas long-term exposure to residential air pollution is not a risk factor for gout in the Swedish setting.

Keywords: gout, crystal arthritis, epidemiology

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