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Original Article

CLINICAL CHARACTERISTICS OF GOUT: A HOSPITAL CASE SERIES

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ABSTRACT
Introduction: Gout is an increasingly common medical problem. The traditional risk factors of male sex and high red meat or alcohol consumption have been joined with newer risks such as increased life expectancy, and the metabolic syndrome (hypertension, diabetes, dyslipidaemia, truncal obesity).
Methods: This was a retrospective study to determine the epidemiology, clinical features, associated conditions as well as renal related conditions in existing gout patients followed-up in Rheumatology outpatient clinic, Hospital Tuanku Ja'afar, Seremban.
Results: Over a three month period, we identified 54 gouty patients on our follow-up, the majority being male, Malay ethnicity, with the age of onset in the third and fourth decades of life. Commonly associated risk factors were hypertension, hyperlipidaemia and obesity. However, underlying history of diabetes mellitus, alcohol consumption, and family history were not commonly associated with gout in our group of patients. Half of our patients had at least two or more joints involvement. About half of the patients with tophaceous gout had renal impairment.
Conclusion: Our series of gout patients highlight the high prevalence of cardiovascular risk factors. The high prevalence of tophi and renal impairment is a cause for concern.
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INTRODUCTION

The incidence of gout has doubled over the past two decades and continues to increase.[1] Studies have established risk factors for gout including genetic factors, excess alcohol consumption, purine-rich diet, the metabolic syndrome, use of diuretics and chronic renal failure. Increasing trends of these underlying factors in the general population, especially diet and the metabolic syndrome may explain the rising prevalence of gout in the community.[2]

The objective of this study is to determine the epidemiological and clinical features as well as associated common conditions of the patients with gout.

METHOD

This was a retrospective study done between March to May of 2006 in Rheumatology Clinic of Hospital Tuanku Ja'afar, Seremban, the capital of the state of Negeri Sembilan in Malaysia. The case notes of all the patients with gout followed-up in the Rheumatology Clinic were reviewed, and demographic and clinical data (e.g. age of onset, pattern of joint involvement, presence of tophi, co-morbidities, and other associated factors such as alcohol consumption) were gathered either at their first presentation to the clinic or during the course of subsequent visits.

RESULTS

In total, we identified 54 patients with gout during the study period. In most cases, the diagnosis was made clinically plus blood chemistry. Only a few patients with diagnostic uncertainty required crystal analysis using polarised light microscopy. 48 (89%) were male and six (11%) were female with the ratio of M:F=8:1. 30 (55.5%) of them had the first onset of symptoms in between the third and fourth decades of life. Among the patients, the majority were Malays (72%), followed by the Indians (20%) and the Chinese (8%).

The presence of commonly associated conditions in our patients is as follows. Hypertension in 37 (68.5%), obesity taken as body mass index (BMI) of ≥30 in 36 (66.7%) and hyperlipidaemia in 36 (66.7%). We noted co-existing diabetes mellitus in seven (13%), alcohol consumption in eight (15%), and family history of gout in 18 (33%). Half of our patients presented with monoarthritis while the other half had two or more joints involvement. 28 (52%) had tophi. Among those with tophaceous gout, 18 (64%) had renal impairment.

DISCUSSION

The preponderance of male gender observed among the gout patients observed in our series is well known. This has been attributed to the higher uric acid level in men since oestrogen increases uric acid excretion in women.[3] The predominance of gout among the Malays has been observed in other Malaysian studies.[4,5] These studies, including our own, are hospital-based and may not truly reflect population prevalence. However, there is suggestion that higher uric acid level occurs among the Malays[6] but we are unable to find more recent population-based comparison of uric acid levels among the major ethnic groups in Malaysia. In view of the higher prevalence of Malay ethnicity in our series, not surprisingly we did not find high prevalence of alcohol consumption (since Malays who are mostly Muslim are forbidden from consuming alcohol).

The association of uric acid as a potential marker of adverse future cardiovascular outcome is controversial[7] but has received renew interest with the publication of two cohort studies demonstrating increased risk of cardiovascular events.[8,9] Our analysis highlights the high prevalence of cardiovascular risk factors among our gouty patients and suggest that cardiovascular risk factors should be routinely examined in such patients.

Our observation of higher prevalence of tophi and renal impairment may be attributed to the selection bias of our Rheumatology Clinic. Nonetheless, we wish to emphasise the importance of assessing renal function in patients with gout as the prolong hyperuricaemia may lead to renal impairment as a result of uric acid calculi formation; conversely, renal impairment may trigger gouty attack by reducing uric acid excretion.

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