AB1269

SERUM IRON LEVELS WERE POSITIVELY ASSOCIATED WITH THE RISK OF HYPERURICEMIA: NHANES 1999-2014

Keywords: Gout, Gender/diversity issues

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Background: Increasing evidence proofs that serum ferritin plays an important role in the development of hyperuricemia (HUA), however, few studies focus on the relationship between serum iron and serum urate (sUA).

Objectives: To examine the relationship between serum iron and serum urate as well as the risk of HUA classified by gender in the US adult population.

Methods: The present cross-sectional study pooled data from 1999 to 2014 National Health and Nutrition Examination Survey (NHANES). The association between serum iron quartiles and hyperuricemia was evaluated by logistic regression. The restricted cubic spline regression was performed to analyze the association between continuous serum iron and sUA.

Results: The study enrolled 25757 participants in total from 1999-2014 annual NHANES cycles. The crude prevalence of hyperuricemia was 11.9%. Serum iron was significantly higher in those with HUA than in those without HUA (16.6μg/dl vs 15.6μg/dl, p<0.001). Logistic regression showed that serum iron levels were positively associated with the risk of HUA in the whole participants and male participants after adjusting for age, BMI and eGFR (Table 1). A dose-response association was observed in the whole participants (P for trend < 0.05). The restricted cubic spline regression analysis showed that the association between continuous serum iron and sUA was different in male participants and female participants (Figure 1). The curve of male participants showed an increasing trend (folding point 13.3μg/dl, P=0.033), while for women, sUA first increased linearly, but after the folding point (6.6μg/dl, P<0.001) the curve flattened out and the increasing trend was not significant.

Conclusion: Serum iron levels were positively associated with the risk of HUA in men. The correlation between serum iron and serum uric acid was influenced by gender. More studies are needed to confirm this relationship and to find out the mechanisms behind as well as the reasons for the gender differences.


Figure 1. Associations of Serum Iron and Serum Urate in the US adult populationIRON, serum iron; sUA, serum urate. The restricted cubic spline regression analyses were adjusted for age, BMI and eGFR.

Acknowledgements: NIL.

Disclosure of Interests: None Declared.

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AB1260

EPIDEMIOLOGICAL, CLINICAL AND CHRONOLOGICAL PROFILE OF HOSPITALIZATIONS FOR CRYS TALLINE ARTHROPATHIES IN SOUTHERN TUNISIA: A DECLINE OF 14 YEARS

Keywords: Gout, Nursing, Crystal arthritis

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Background: Crystalline arthropathies (CA) are a group of joint disorders caused by deposits of crystals in joints and the soft tissues around them. The most common type is gout. Over time, CA could lead to joint damage and even for other serious complications that could require hospitalization.

Objectives: This study aimed to determine the epidemiological, clinical and chronological profile of hospitalizations for CA in southern Tunisia for 14 years.

Methods: This was an observational retrospective study that included patients hospitalized for CA in the Hedi Chaker University Hospital Southern Tunisia, during the period 2003-2016. Data collection was done as part of the continuous survey of hospital morbidity and mortality.

Results: Among 148596 admissions, 187 cases were hospitalized for CA (0.12%), of which 122 subjects (84.9%) were males. The median age of hospitalized patients was 66 years (IQR=54-75) years. There were 96 patients (51.3%) aged>65 years. The most frequent type of CA was noted with a global frequency of hospitalizations about 72.2% (n=135). Complications were noted among 11 patients (5.9%). They were especially cardiovascular diseases in 5 cases (2.6%). The mean total cost of hospitalizations for CA was about 507 Tunisian Dinars (IQR=355-718) Tunisian Dinars. The median length of hospital stay was 10 days (IQR=[6-25]) days. A duration>10 days was statistically more frequent among patients with CA other than gout (Odds Ratio (OR)=2.12; p=0.026). Moreover, gout was statistically more frequent among patients aged less than 65 years old (OR=2.8; p=0.002). The study of the evolution profile of hospitalizations for CA showed a global trend statistically constant across the years (Rho=0.17; p=0.54). As well, there were no statistical variability of hospitalizations trends according to CA type specifically gout (Rho=0.28; p=0.32) and other CA types (Rho=0.08; p=0.77) during the survey period.

Conclusion: CA notably gout continue to be a relatively frequent source of hospitalizations in southern Tunisia with a stable chronological trend over the years. Thus, an adequate and a continuous management must be maintained for patients in order to control the complicated forms of these pathologies.

REFERENCES: NIL.

Acknowledgements: NIL.

Disclosure of Interests: None Declared.

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Table 1. Associations of Serum Iron levels with the Prevalence of HU in the US adult population. Weighted

<table>
<thead>
<tr>
<th>Iron</th>
<th>Total(n=25757)</th>
<th>Male(n=12582)</th>
<th>Female (n=13175)</th>
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</thead>
<tbody>
<tr>
<td>OR</td>
<td>95%CI low</td>
<td>P-value</td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td>95%CI upp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O1</td>
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</tr>
</tbody>
</table>

CI, confidence interval; Ref., reference; OR, odd ratio. The model was constructed by using logistic regression.