Lipid profile: a conduit in the progression from psoriasis to cardiovascular disease

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ABSTRACT

Background: Psoriasis although a disease of the skin has been reported to be associated with metabolic syndrome. Metabolic syndrome in turn is associated with dyslipidemia which is an independent risk factor for cardiovascular diseases. Our study therefore aims to assess lipid profile in patients with psoriasis with an objective to observe and report any significant deviations in the same as compared to healthy controls.

Methods: 25 patients with psoriasis and 25 age, sex matched healthy controls were recruited in this study and lipid profile was estimated using commercially available reagent kit which employs the CHOD-PAP method.

Results: Significant elevation in levels of total cholesterol, triglycerides, VLDL and cholesterol/HDL ratio was observed. Elevated although was observed in case of LDL and HDL levels, but it was statistically insignificant.

Conclusions: Dyslipidemia was found to be prevalent in psoriasis patients. Dyslipidemia is an independent risk factor for development of cardiovascular disease. Dyslipidemia in psoriasis therefore clearly suggests an inherent predisposition of psoriasis patients to suffer from cardiovascular diseases. A lipid profile estimation in these patients therefore might serve as an important tool for risk assessment for cardiovascular disease, thereby aiding a timely intervention.

Keywords: Dyslipidemia, Lipid profile, Psoriasis

INTRODUCTION

Psoriasis is a very common dermatological disease with about 1% of the world’s total population affected by it.¹ An estimated 125 million people in this world are affected by psoriasis.¹Psoriasis has been reported to be associated with multi organ system involvement and is being hence believed to be a systemic disorder rather than just being a dermatological illness.² A disturbance in lipid dynamics resulting in a consequent dyslipidemic status has been reported by several researchers of being associated with psoriasis.³ It has also been reported by several researchers that the disturbance in lipid metabolism in psoriasis is possibly genetically determined.³ Alteration in the lipid dynamics and consequent elevated plasma lipid concentrations increase the risk of atherosclerosis and consequent cardiovascular diseases.⁴ Psoriasis has been reported to be associated with metabolic syndrome which in turn is associated with dyslipidemic status.⁴ Hence we proposed to carry out a study directed towards observation of various lipid levels in blood and flag significant deviations if any in patients with psoriasis when compared to age and sex matched healthy controls.

METHODS

The study was carried out at Institute of Medical Sciences and Sum Hospital, Bhubaneswar during the period spanning from March 2016 to July 2016. The study
RESULTS

Our study has revealed higher levels of cholesterol, triglycerides, VLDL, and LDL levels in patients with psoriasis as compared to the healthy controls. HDL levels although were grossly diminished (Table 1). Hypercholesterolemia was quite evident in the patients with psoriasis, with the study group exhibiting a mean of 207.09 mg% which was substantially higher than the control group standing at 132.02 mg%.

Table: Lipid profile in psoriasis patients and controls.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Group 1 (patients)</th>
<th>Group 2 (controls)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholesterol (mg%)</td>
<td>207.09±15.4</td>
<td>132.02±18.09</td>
</tr>
<tr>
<td>Triglyceride (mg%)</td>
<td>223.12±16.55</td>
<td>131.4±16.35</td>
</tr>
<tr>
<td>VLDL (mg%)</td>
<td>44.51±3.51</td>
<td>26.71±3.23</td>
</tr>
<tr>
<td>LDL (mg%)</td>
<td>134.27±9.81</td>
<td>66.89±11.98</td>
</tr>
<tr>
<td>HDL (mg%)</td>
<td>39.32±4.68</td>
<td>48.43±4.32</td>
</tr>
</tbody>
</table>

CONCLUSION

As is evident from our study dyslipidemia seems to be an integral part of psoriasis. Dyslipidemia being an independent risk factor for cardiovascular disease, therefore demonstrates a very high predisposition of these patients to suffer from atherosclerosis and subsequent ischaemic heart disease. We therefore propose that lipid profile assessment should be taken up as a routine investigation for patients diagnosed with psoriasis. This might in turn aid in a timely screening of the patients at high risk for cardiovascular diseases and hence a timely intervention can be instituted.

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REFERENCES


