BLOOD SUGAR AND SERUM CHOLESTEROL LEVELS IN PSORIASIS

TILAK R. BEDI

Summary

Fifty psoriatic patients were studied for serum cholesterol and blood sugar estimations. Indian psoriatics do not appear to show low serum cholesterol levels. The prevalence rate of diabetes mellitus in them was found to be 6%, about twice the rate seen in normal population. In patients with diabetic state, psoriasis appears to be more recalcitrant to conventional tar treatment.

The available data on blood sugar and serum cholesterol levels in psoriasis is contradictory. While Reed et al[1] found 25% of 103 psoriasis patients having diabetes mellitus, Lynch[2] observed that there is no more than chance relationship between psoriasis and diabetes mellitus. Among 162 psoriasis patients in an earlier study from north India[3], 5% of the patients were seen to have diabetes. Similar figures have been reported by Mehta et al[4], Bombay. Following the reports of low serum cholesterol levels in psoriasis by Tickner & Mier[5], other workers from India[6,7] have reported similar results in varying percentage of psoriatic patients. The present communication deals with the results of blood sugar and serum cholesterol estimations in 50 psoriasis patients from northern parts of India.

Material & Methods

Fifty patients (36 male, 14 female in the age group 20-56 years) suffering from plaque psoriasis were studied. None of the patients had any clinically apparent systemic disease. Most patients had been treated with tar ointment, 12 received topical steroids some time during their illness in the past but none had ever been on systemic steroid therapy. The patients were instructed to come fasting on the morning of the test day and the blood samples for fasting blood sugar and cholesterol were drawn. Postprandial blood samples were collected after 2 hours of carbohydrate rich diet between 9 and 11-30 a. m. The blood sugar levels were estimated by technicon Mark-I Autoanalyzer and serum cholesterol by the manual method[8].

The normal range for blood sugar in our laboratory is 80-120 mg% (fasting) and < 150 mg% (2 hour postprandial). The values higher than these were indicative of diabetes mellitus. The normal range for serum cholesterol is 120-230 mg% in our laboratory.

Results

Three (6%) of the patients were detected to have diabetes mellitus. Two of them also showed serum cholesterol values of more than 230 mg%. In all, 11 patients (22%) had higher serum

Department of Dermatology,
Postgraduate Institute of Medical Education & Research, Chandigarh
Request for reprints to:
Consultant in Dermatology,
30 UB, Jawahar Nagar, Delhi 110007
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TABLE 1

Frequency of diabetes mellitus and high serum cholesterol levels in patients with plaque psoriasis.

Age Group (years)	Males	Females	Total No. of Cases	Number of cases with	
				Diabetes Mellitus	High Serum Cholesterol
20—30	9	5	14	0	3
31—40	13	3	16	1	4
41—50	4	5	9	1	2
Over 50	10	1	11	1	2
Total	36	14	50	3 (6%)	11 (22%)

TABLE 2

Comparative data on serum cholesterol values from various studies depicting percentage patients.

Study	Number of Cases	Serum Cholesterol Levels		
		Low	Normal	High
Varma (1966)	30	7%	70%	23%
Hajini et al (1976)	86	18%	82%	0%
Mehta et al (1976)	300	15%	80%	5%
Present	50	0%	78%	22%

cholesterol values. Discounting hypercholesterolemia because of underlying diabetic state in 2 patients, higher serum cholesterol values were obtained in 18% of the patients only. None of the patients had serum cholesterol values lower than the normal and 39 patients had normal values.

Discussions

Indian psoriatics do not appear to have serum cholesterol levels lower than the normal Indian population. In fact 22% of psoriatics in this study showed serum cholesterol values higher than normal and a large majority (78%) had normal serum cholesterol levels. In 2 patients higher levels could be possibly ascribed to co-existing diabetic state.

As far as diabetes mellitus is concerned, the observed rate of 6% is more than twice the prevalence of diabetes mellitus (2.91%) in urban population of Chandigarh[9]. The patients with associated diabetes mellitus in general appear to have psoriasis of long duration and the disease is more recalcitrant to conventional tar treatment.

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