Occupational Podoconiosis

Sir,

Silica constitutes about 30% of the soil of the crest of the earth. Silica exposure of lungs causes silicosis and lower limb skin to podoconiosis. Podoconiosis is derived from Greek words Podos meaning ‘of foot’ and konion meaning ‘dust’. Most cases of podoconiosis are described in African barefooted agriculturists. It has also been described from India. We describe occupational podoconiosis in a labourer involving legs and lower back.

A 45 year old ex-labourer presented with breathlessness, palpitations and swelling feet of 1 month duration. He was a known case of rheumatic mitral stenosis and regurgitation and treated repeatedly for these complaints for the last 15 years and was relieved of his symptoms after taking drugs. Rest of the history was non-contributory except for his smoking of 4-5 bidis/day for the last 20 years. He was working as labourer for the last 25 years but left it for the last 6 months.

His examination revealed congestive heart failure, mitral stenosis, regurgitation and tricuspid regurgitation, atrial fibrillation and COPD. The generalised oedema was pitting in face, upper limbs, front and back of trunk and non-pitting below knees in lower limbs and lower part of the back. The skin over the non-pitting oedema was darker, hairless, and shiny and could not be pinched with the fingers. The Kaposi-Stemer sign was also positive—skin over the dorsum of both 2nd toes could not be pinched between two fingers.

His haemogram, urinalysis, liver, kidney, thyroid function tests and filarial workup were non-contributory. His CXR was compatible with CCF and COPD and echo revealed mitral stenosis, regurgitation and tricuspid regurgitation. USG showed hepatomegaly, normal portal vein and peritoneal fluid. His skin biopsy was done which revealed hyperkeratosis, loss of rete pegs, collagenised stroma without evident adnexae structures and dispersed pigmented macrophages. He was treated with oxygen, diuretics, digitalis and ace-inhibitors. His breathlessness, palpitations and oedema subsided except below the knees and back.

Patient was exposed to silica (cement) dust for the last 25 years from morning till evening while he was carrying cement bags on his back from cement store to his goods-carrying-rickshaw, paddling the rickshaw to the construction site and unloading the cement bags on his back. At his work place he was bearing string-tied half-pant and banyan and covering his head and face with a cloth. The sweating due to high temperature of Bareilly kept it for a longer period on the skin resulting in exaggerated absorption from skin and subsequent development of CCF further prolonged it. The micro particles of silica from the skin interstitium are collected by the minute lymphatic channels called pre-lymphatics of superficial skin to smaller collecting lymph vessels and subsequently to larger lymph vessels before reaching the lymph nodes. They damage the endothelium of lymph channels and vessels, valves of lymph vessels and lymph nodes during their passage. The damage to valves of lymph vessels hampers the ‘mini-hearts’ function of larger lymph vessels. ‘Mini-hearts’ are the small segments of lymph vessels between the two valves which contract like heart in series and propel the lymph against gravity. Obstruction of lymph flow causes pitting oedema and subsequent fibrosis results in non-pitting oedema.

References


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Hereditary Cerebral Arteriopathy with Subcortical Infarcts and Leucoencephalopathy

Sir,

Vasculopathies contribute to majority of cerebrovascular diseases, cognitive impairment, behavioural disorders, headache and seizures etc. A varieties of causes are involved in their causation besides hereditary or genetic ones.

Hereditary vasculopathies are broadly of two types-the more common one being the cerebral autosomal dominant arteriopathy with subcortical infarcts and leucoencephalopathy (CADASIL) and the far less commonly reported is cerebral autosomal recessive arteriopathy with subcortical infarcts and leucoencephalopathy (CARASIL). The CADASIL has granular osmophilic material (GOM) in vessel walls, whereas CARASIL has characteristic lumbosacral spine and knee joint abnormalities besides alopecia.

Certain other families has/have been described resembling CADASIL but lacking GOM.

The prevalence of CADASIL has been estimated to be around 1: 100000 while only a few case reports of CARASIL and still rarer is the variety with CADASIL phenotype but lacking GOM. Till now to the best of my knowledge one patient each of CADASIL2 and CARASIL (Diwan et al May 2012, issue JAPI, Page-59-61) have been described from India. India being a densely populated county there are about tens of thousands of CADASIL patients. So there is need of the hour to do a study on such patients which can alter the prospectus of large population in the era of gene therapy and stem cell therapy.

The CADASIL patients from Japan have been reported beaked vertebra specially the lumbosacral ones and, most of the CARASIL patients have been reported from Japan so, there is fairly good possibility of some common reason for the both i.e. dominant and recessive variety, which we should look into our further case reports and studies in this respect.

The impaired vasoreactivity observed in CADASIL patients
highlights implication of both endothelial and smooth muscle functional alteration in mildly disabled subjects, so improvement in vascular function could be a target for pharmacological trials in CADASIL patients. The concept of the ‘neurovascular link in health and disease’ may answer some of the problematic aspect of these arteriopathies which till date have no specific or supportive treatment modalities.

Last but not least I would like to congratulate the authors Diwan and colleagues (JAPI May 2012 issue, Vol 60, page no. 59-61) in this regard that their team have propagated our initiative of the first case report of CADASIL in 2004. But besides that I would also like to suggest a correction on reference 1, in line number 10 of the very first paragraph, and right spelling of world famous renowned neurologist of our country, my honorable teacher and first author of our article.

I came across two patients of suspected CADASIL in last 8 years after our first case report from the country, but the patients lost to follow-up before complete work-up. This aspect of illiteracy or ignorance by patients and relatives contributed a lot to the already scarce research facilities and incentives for research in our country.

The aim of this correspondence is to make aware the clinicians in general and neurologists in particular, about a rare vasculopathy but, common hereditary vasculopathy in the era of advanced neuro-radiology, neuropathology, gene therapy and stem cell therapy.

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Epidemiological Study of Blood Pressure Distribution and Prevalence of Hypertension in Spiti Valley of Himachal Pradesh

Sirs,

I have read with interest the original article ‘Epidemiological, Cross-sectional Study’ by Negi et al.1 It is claimed and that the authors could not find any other similar study done in Spiti valley. I therefore would like to refer to an epidemiological house to house survey of blood pressure (BP) distributions at Kibber and neighbouring villages (4205 m) and Losar (4085 m) in Spiti valley of Himachal Pradesh In 1981.2 Cut off point to diagnose hypertension was 160/94. Men (193) and Women (216) were examined for BP height and weight. Prevalence of hypertension was 6.2% in men and 33 % in women, crude prevalence being 4.6%. There was rise of BP with advancing age in the community. Since then the acculturation of the native population has occurred and prevalence of hypertension is expected to rise.

BP distribution in communities at different altitude of HP (1100 m to 4205 m) was studied in an urban and 8 rural locations.3 In all 12303 persons including 6115 men and 6188 women were studied. It was concluded that rather than altitude it is the rural or urban way of life which determines the BP distribution in the community. Most of the natives of high altitude are in the habit of drinking salted tea and alcoholic drinks brewed domestically from barley or rice. In the long winter months they spend a sedentary life Indoor. Smoking is also prevalent widely in these regions. These are important factors which determine B.P. distribution in a society.

If we are to study the effect of hypobaric and hypoxic ambience of high altitude on BP, groups of people should be shifted to these regions from the plains and the difference of BP if any may be studied. A high altitude simulator in the form of rooms may be built which will provide hypoxic, hypobaric and cold ambience to study such effects.

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Carotid Intima Media Thickness in Type-2 Diabetes Mellitus with Cardiac Autonomic Neuropathy

Sir,

This is in response to the original article ‘Carotid Intima Media Thickness in Type-2 Diabetes Mellitus with cardiac autonomic neuropathy’ by Pradip Kumar Sinha et al.1

In this exhaustive study, the researchers have analyzed at least 20 clinical and biochemical characteristics in the study population. The researchers observed that high LDL cholesterol levels were significantly associated with the development of CAN.

However, the number of patients who were on statin therapy has not been mentioned in the study.

If in the univariate analysis, the authors also include the use of statins (they have included the use of OHA/insulin) it would help in assessing their role in preventing CAN; either by their pleiotropic or by their lipid lowering effect.

Hypertension contributes to development of CAN in patients of type-2 diabetes mellitus.2,3

However, in this study, CAN has been observed in type-2
diabetes mellitus (T2DM) without hypertension being a statistically significant contributing factor. This is an interesting observation and needs discussion.

References

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Reply from Author

Sir,

I welcome Dr. Devendra Sehra for reading meticulously and giving suggestion regarding the article ‘Carotid intima-media thickness in type 2 diabetes mellitus patients with cardiac autonomic neuropathy’ published in J Assoc Physicians India 2012;60:14-18.

In our study, 21 patients without cardiac autonomic neuropathy (CAN) (n = 48) and 13 patients with CAN (n = 36) had history of intake of statin. Intake of statin was more prevalent in patients without CAN than in patients with CAN (43.75% vs. 34.11%), though the difference was not statistically significant (p >0.05). Also, intake of statin was irregular in all of them. Because of irregularity of intake of statin, it is not possible to comment definitely the effect of statin from this study. A study with large sample size will be helpful to determine the role of statin in development of CAN.

Studies revealed that hypertension can contribute to development of CAN in type 2 diabetes mellitus patients. Except hypertension, other parameters also have independent role in development of CAN.¹ In our study, from univariate analysis, differences of systolic (SBP) and diastolic blood pressure (DBP) of two groups of patients with CAN and without CAN were not statistically significant, though slightly higher SBP and DBP were seen in CAN group and means of SBP and DBP were higher than normal in both groups. Our sample size was small. A large study will be helpful to comment definitely regarding the development of CAN in type 2 diabetes mellitus patients with respect to blood pressure. In reverse way, it should be remembered that severe CAN can itself lead to hypertension and microangiopathic complications.²

References


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