Brachioradial Pruritus – An Uncommon Photodermatosis Presenting in a Temperate Climate

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Key Words

Brachioradial pruritus

Photodermatosis

Temperate climate

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A 47-year-old Irish man presented with a 10-year history of marked pruritus involving the brachioradial areas of both forearms. It had a seasonal pattern with an onset each year in July and would persist throughout the summer but gradually fade and disappear between October and November only to recur the following year. The pruritus also demonstrated a diurnal variation, being much more intense during the evening and night, and would often disturb his sleep. Intense sunlight exposure and a rise in environmental temperature were felt to be exacerbating factors. Despite his intense pruritus, at no point had

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any rash or objective skin change been apparent. Of note this man had spent 6 weeks in Florida during July and August each year for the previous 13 years. He had no other relevant past medical history and gave no history of neck pain or trauma to the spine. He was on no current topical or systemic medications. There was no family history of photodermatoses or similar complaints.

Examination of the skin showed marked evidence of solar damage on the face, neck and forearms with multiple actinic lentigines. There were no other abnormalities at the sites of pruritus. Neurological examination was normal and the cervical spine demonstrated a full range of pain-free movement.

Full blood count, biochemical profile, porphyrin screen, auto-antibody profile including anti-Ro and anti-La were entirely normal or negative. Skin biopsy was not undertaken.

A diagnosis of brachioradial pruritus was made, and the patient was advised on strict sun protection measures including close-knit clothing and high-factor sunscreens. Within 4 weeks his pruritus had totally resolved.

Waisman's original description of brachioradial pruritus [1] outlined a disorder occurring particularly in males in the fourth to sixth decades characterized by intense pruritus localized to the upper brachioradial area of one or both arms which recurred in a seasonal pattern. In addition, diurnal variation with exacerbation in the evening was common and examination revealed no abnormal cutaneous findings with the exception of excoriations [1]. The disorder

was attributed to prolonged sun exposure. Since his original paper, a number of series of cases have been reported from the tropics and subtropics, but there have been only isolated case reports from temperate climates [2-4J]. Other features described in these subsequent series include a continuous pruritus rather than recurrent episodes in some individuals, aggravation by a rise in temperature and the development of additional pruritic areas.

The aetiology of the disorder remains uncertain. Sunlight exposure, cervical spine disease and local nerve damage have all been proposed. Heyl [2] reported evidence of cervical spine abnormalities in 4 of 5 cases in which cervical X-rays were performed with significant improvement in symptoms following physiotherapy or orthopaedic treatment. He proposed that brachioradial pruritus may in some cases be attributable to nerve injury secondary to pathology within the cervical spine. Walcyk and Elpern [3], however, in a subsequent series from Hawaii, failed to show consistent evidence of cervical spine abnormalities but instead favoured sunlight as the most important aetiological factor. The absence of a strict dermatomal distribution would also seem to argue against nerve compression at the cervical spine level as the primary aetiological factor. The seasonal nature of the disorder, with onset in the summer months and disappearance during winter months in many cases, the abundance of reports from tropical and subtropical climates and paucity of reports from temperate areas and the resolution of symptoms after initiation of photoprotective measures represent strong evidence that brachioradial pruritus is a true photodermatosis. It has been proposed that intense and prolonged ultraviolet exposure may cause damage to local cutaneous nerve endings in susceptible individuals which in turn leads to altered sensation and pruritus [3]. Indeed, a recent ultrastructural study in brachioradial pruritus did demonstrate splitting of myelin sheaths in lesional skin [5]. The wavelengths involved in this disorder however require further study. The case we report is a gentleman of Celtic ancestry who had considerable recreational sunlight exposure in Florida over a prolonged period and presented in Belfast with a history and physical findings consistent with brachioradial pruritus. This is a rare photodermatosis in temperate climates with a sparsity of reports in the European literature. Clinicians in these areas need to be alert to the increasing trend for overseas travel with recurrent and often prolonged tropical sun exposure so that susceptible individuals presenting with this distinct entity are promptly recognized and appropriate photoprotective measures initiated.

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