



Vitamin D deficiency in the pathogenesis of leiomyoma and intravascular leiomyomatosis

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Abstract

We recently reported a case of recurrent intravascular leiomyomatosis in a pre-menopausal woman of African-Caribbean heritage(1). She presented in 2006 with multiple uterine leiomyomata, tumour invading the inferior vena cava (IVC) extending into the right atrium, and pulmonary metastases. Her initial presentation was managed surgically and the histology was reported as benign leiomyoma. On recurrence 3 years later she was treated by oestrogen suppression using a combination of goserelin and letrozole, with a substantial response, avoiding surgical intervention. She subsequently reported further regression of disease following exposure to strong sunlight suggesting that the improvement was due to vitamin D. Using a combination of sunbed use and oral vitamin D supplementation she was able to discontinue oestrogen suppression without relapse.. Epidemiological studies have demonstrated a strong link between hypovitaminosis D and the incidence of uterine leiomyomata, including data linking ethnicity and risk, owing to a reduction in vitamin D production in the skin of women with darker skin(2-4). Vitamin D affects both oestrogen and progesterone receptor expression and influences other signalling pathways involved in the pathogenesis of leiomyomas(5, 6). It is now known that intravascular leiomyomatosis is an intermediate grade malignancy and a review of the original histology is consistent with this diagnosis(7). This case demonstrates the dependence of this disease on oestrogenic drive. We are not aware of other reports indicating a link between intravascular leiomyomatosis and a lack of vitamin D.

Biography

Ian Judson is working at The Institute of Cancer Research, London

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