

## Case Report

### A CASE OF ACHES AND PAINS

**\*Vikram G. Aarella**

*Specialist Registrar in Diabetes and Endocrinology, Kings Mill Hospital,  
Sutton in Ashfield, UK*

*\*Author for Correspondence*

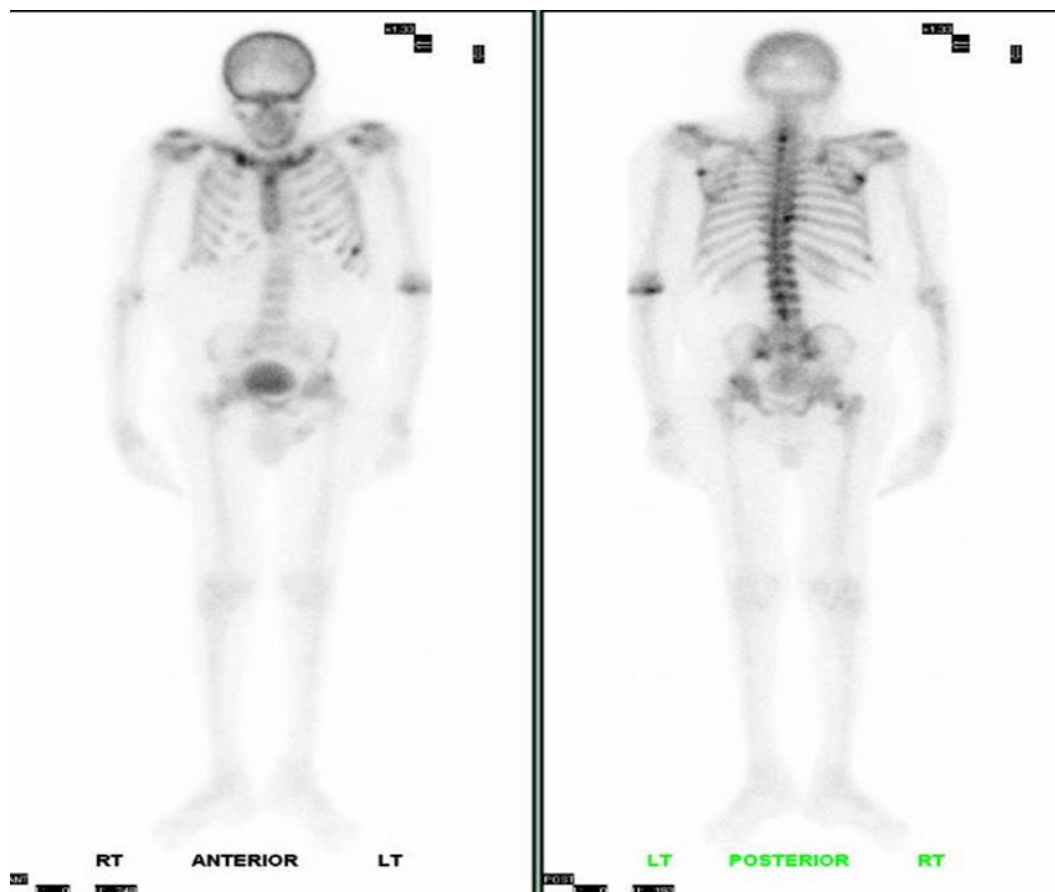
#### ABSTRACT

Vitamin D deficiency is common condition in cold countries with sparse sunlight. It is especially more prevalent in the Asian origin people living in the countries of higher latitudes (Yuen and Jablonski, 2010). Diagnosis is usually delayed due to the vagueness of the symptoms. Here we report a case of Vitamin D deficiency causing Osteomalacia in an Asian gentleman of Indian ethnic origin. The diagnosis was probably missed by several years before this admission.

**Keywords:** Aches, Pain

#### CASES

The patient was admitted to the hospital in the summer of 2011, with complaints of right hip pain, he had an X ray of the hip and since no fractures were identified with only osteopenic changes in the bone, he was referred to general medicine as a social admission. He was 55 years old; He had lived in United Kingdom for past 20years with his brother. He was from Kenya originally of Indian Hindu ethnic background.



**Bone scan showing focal areas of uptake in scapulae, right femoral neck and pubic rami**

### Case Report

He had poliomyelitis when he was 5 years old and had left him paralysed in both lower limbs, he was unable to walk and had been house bound for many years. He spoke little English. He had past medical history of recurrent falls; his left elbow was injected with steroids in 2006 due to pain, treated for introthoracic/mediastinal tuberculosis and Bell's palsy in 2007 and fracture of right clavicle in 2008. His baseline kidney functions were normal, his alkaline phosphatase was raised at 423, adjusted calcium was low normal at 2.28mmol/L, and Haemoglobin was 11.1g/dl with a MCV of 70fL.

He continued to have generalised aches and pains. He was reviewed by orthopaedic surgeons whilst he was with us, they concluded that he had a healing superior and inferior pubic rami fracture, and was for conservative management. He continued to have pain in the hip and legs and further investigations were ordered including PTH, Vitamin D and a bone scan.

His celiac screen was negative; Vitamin D was low at less than 5nmol/L, Parathyroid Hormone was raised at 73.6pg/ml, low ferritin at 13ug/L, with normal vitamin B12 and folate. Bone scan was reported as showing focal areas of uptake in scapulae, right femoral neck and pubic rami likely to represent loser's zones due to underlying osteomalacia. The scan also picked up co existing lower rib fractures and old healed right clavicular fractures.

Patient had vitamin D and calcium replacement; he also had Cosmofer injections for Iron deficiency. He started to feel better with reduced need for analgesics. His brother told us that the patient had seen his own doctor several times with similar complaints but was never investigated.

### DISCUSSION

Osteomalacia is caused by inadequate mineralisation of bone matrix. It is an extreme manifestation of severe vitamin D deficiency. Vitamin D deficiency causes low calcium and secondary hyperparathyroidism. Osteomalacia is underdiagnosed in Asian patients residing in the UK (Finch *et al.*), because of its nonspecific symptoms (Campbell, 1990).

This is attributed to the strict vegetarian diet especially among Hindus and lack of exposure to sunlight. The main symptoms are musculoskeletal in nature. Our patient did not have adequate exposure to sunlight due to his disability and also followed strict vegetarian diet. The main symptoms of vitamin D deficiency are muscle weakness, bone pain, cramps, muscle stiffness, numbness or tingling, fractures and fatigue. Due to the vagueness of symptoms in our patient, Vitamin D deficiency was not suspected initially.

It has also been known that Vitamin D has a role to play in Tuberculosis (Rook, 1988; Talat *et al.*, 2010) and our patient did have tuberculosis in 2007 which makes us wonder if Vitamin D deficiency contributed in him acquiring tuberculosis. It is also known that the people living in higher latitudes have lighter skin; this has been postulated to have evolved to facilitate vitamin D production under conditions of low ultra-violet B radiation (Yuen and Jablonski, 2010).

Varying degrees of depigmentation evolved in order to permit UVB-induced synthesis of previtamin D<sub>3</sub> (Jablonski and Chaplin, 2000). Our patient being Asian in origin and having darker skin colour made him prone to have Vitamin D deficiency. Treatment of osteomalacia is Vitamin D replacement and calcium supplements.

### Learning Points

- To be aware of high probability of Vitamin D deficiency in people of Asian origin living in UK and other European countries.
- The importance of good history taking including past medical history and social circumstance.

### REFERENCES

- Campbell GA (1990).** Osteomalacia: diagnosis and management. *British Journal of Hospital Medicine* **44** 332-338.
- Finch PJ *et al.*, (No Date).** Clinical and Histological spectrum of osteomalacia among Asians in south London. Available: DOI: <http://dx.doi.org/439-448>.
- Jablonski NG and Chaplin G (2000).** The evolution of human skin colouration. *Journal of Human Evolution* **39**(1) 57-106.

**Case Report**

**Rook GA (1988).** The role of vitamin D in tuberculosis. *American Review of Respiratory Disease* **138** 768–70, PubMed.

**Talat N, Perry S, Parsonnet J, Dawood G and Hussai R (2010).** Vitamin D deficiency and tuberculosis progression. *Emerging Infectious Diseases* **16**(5).

**Yuen AWC and Jablonski NG (2010).** Vitamin D in evolution of human skin colour. *Medical Hypotheses* **74**(1) 39–44.