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MEDICAL MEMORANDUM

Osteitis Deformans in Nigerians

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Summary. Five cases of Paget's disease of bone in Nigerians are reported. Original films were available in only two cases and show changes typical of Paget's disease. One of these has been followed for 9 years. One other case with an alkaline phosphatase of 37 KA units went to U.K. where the diagnosis was confirmed. Two of the five cases have only the original X-ray reports as evidence of the disease.

Osteitis deformans is still thought to be uncommon in Nigerians but this report is not intended to prove or disprove this general impression, only to document its existence in Nigerians.

Résumé. L'auteur rapporte cinq cas de maladie de Paget (forme osseuse) au Nigéria. Les images radiologiques, ont pu être obtenues dans deux cas seulement: mais elles sont typiques. Un des malades a été suivi pendant 9 ans à l'hopital. Dans un autre cas, avec une augmentation des phosphatases alcalines (37 KA units), le diagnostic a été reconfirmé en Angleterre.

L'osteite dèformante est exceptionelle au Nigéria. Cet article, est néamoins un document prouvant l'existence de la maladie de Paget au Nigéria.

This brief communication is to record the existence of osteitis deformans (Paget's disease of bone) in Nigerians.

A thorough computer search of the world literature using U.K. MEDLARS* revealed not a single reference to Paget's disease or osteitis deformans anywhere in Africa between 1963 and 1968. This surprising result prompted the present communication, even though there have been a few isolated reports of osteitis deformans in Africans prior to 1963 (Singer, 1962; Davidson, 1961).

Over 200 000 individuals have been examined in the Radiology Department, University College Hospital (U.C.H.), Ibadan, since it opened in 1957. Roentgenographic findings of Paget's disease were seen in five patients who form the basis of this report (Table 1).

* Medical Literature Analysis and Retrieval System, National Library of Medicine, Bethesda, Maryland, U.S.A.

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CASE REPORTS

Case 1

A 48-year-old male Yoruba presented in 1959 with symptoms in the right knee. X-rays (Fig. 1), revealed cortical and trabecular thickening characteristic of Paget's disease. Follow-up films 9 years later showed no significant change. Films of the skull, chest and pelvis were negative.

Comment. In long bones Paget's disease essentially always begins at one end as seen here. The thickened trabeculae and cortex are the typical roentgenographic findings in this disease. Enlargement of the bone may also take place as sclerosis increases and the bones may become deformed—hence the name, osteitis deformans. Deformity is not seen with osteoblastic secondaries, a common consideration in differential diagnosis.

The roentgenographic findings can be pathognomic in the sclerotic phase. In the earlier lytic phase the diagnosis is more difficult radiologically and confirmation by other means may be required.

TABLE 1

	Case 1	Case 2	Case 3	Case 4	Case 5
Age (yr)	48	53	57	58	53
Sex	M	M	M	M	F
Tribe	Yoruba	Yoruba	Efik	Yoruba	Yoruba
X-rays available (site of involvement)	Tibia	Ileum			
X-ray report only (sites of involvement)			Skull, spine pelvis, long bones	Femur	Humerus
Symptoms referable to Paget's	Yes	No	Yes	No	No
Alkaline phosphatase			37 KA Units		
Follow-up	9 years unchanged		Confirmed in U.K.		

Case 2

A 53-year-old male Yoruba had films taken for colonic symptoms. Changes characteristic of Paget's disease were noted in the right ileum (Fig. 2).

Comment. The ischial ramus shows the combined phase of the disease with areas of osteolysis and sclerosis.

It is unusual for secondaries from carcinoma of the prostate or other osteoblastic secondaries which enter into the differential diagnosis of this condition to be so extensive in one half of the pelvis and not involve the other half. This is frequently seen in Paget's disease.

About 20% of patients with Paget's disease are asymptomatic (Edeiken & Hodes, 1967).

Case 3

A 57-year-old Efik male was referred from Calabar with leg pain for 2 years, bowing of the legs, a pulsating swelling of the head for 2 months and weakness. Films (no longer

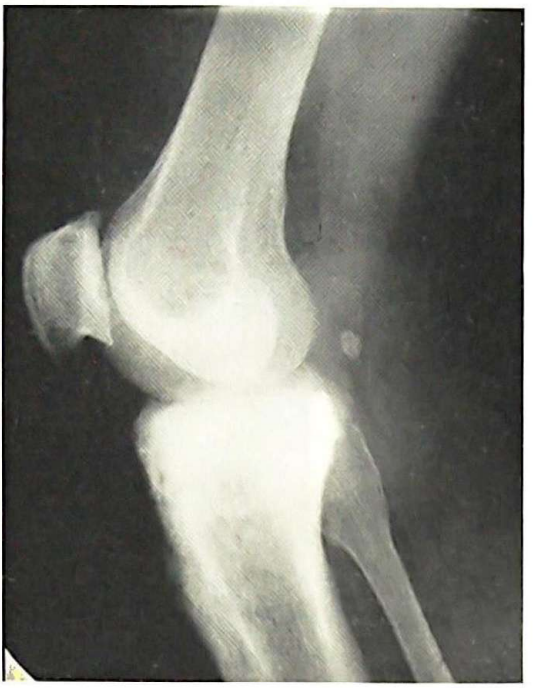

FIG. 1. Case 1. Lateral view of the knee showing cortical and trabecular thickening characteristic of Paget's disease.

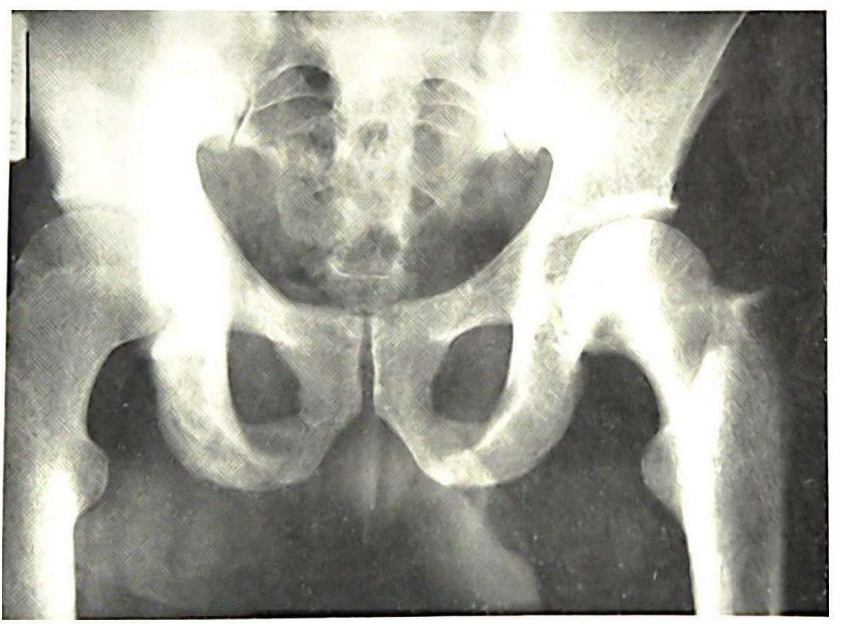

FIG. 2. Case 2. Antero-posterior view of the pelvis showing the typical cortical and trabecular thickening on the right. This can be compared with the normal left side.

available) were reported as showing extensive Paget's disease involving the skull, spine, pelvis and long bones. Alkaline phosphatase was 37 KA units, calcium, 6·9 mg/100 ml, phosphorus 3·5 mg/100 ml. The patient was also seen in U.K. where the diagnosis of Paget's disease was said to have been confirmed.

Comment. Anterior bowing of the tibia and lateral bowing of the femur is not uncommon in Paget's disease. Fissure fractures may develop on the convex side of the bowed bone.

The increased circulation through the lesions accounts for the subjective pulsatile feeling and warmth which may be felt by some patients. The level of the alkaline phosphatase is thought to reflect the activity of the disease. There is an increase as the disease progresses from the lytic to the blastic phase (Wilner & Sherman, 1966).

Case 4

A 58-year-old Yoruba male had an IVP for urinary obstruction. The right femoral neck and head were described as showing coarse trabeculation, thickened cortex and expansion characteristic of Paget's disease.

Case 5

A 53-year-old Yoruba female with hypertension had a chest X-ray. The proximal right humerus was reported as showing enlargement with coarsened trabeculae in keeping with Paget's disease.

Comment. The humerus is an uncommon site of involvement. The most common sites are sacrum, spine, skull, pelvis and tibia (Collins, 1966).

DISCUSSION

Paget's disease of bone or osteitis deformans was first described by Sir James Paget in 1877 (Paget, 1877). Following the development of radiology, it is now frequently the radiologist who is first to recognize the diagnosis. It is a disease of middle and old age affecting men more commonly than women. Our patients were all aged 48–58 with an average age of 54. Four of the five are male.

Although multiple hypotheses have been put forward regarding the aetiology, none is generally accepted and the cause of Paget's disease remains obscure.

It is considered to be a common disease in western countries; Reinfenstein (1950) estimates that 3% of all persons over 40 are afflicted and Collins (1966) states that the incidence increases with age to a figure of over 10% in the over-90 age group. The condition is generally considered to be uncommon in Africans (Edington & Gilles, 1969). Geographic variations in prevalence have previously been noted, not only within a country (Rosenbaum & Hanson, 1969), but between different countries (Sissons, 1966). Sissons (1966) also notes that it is rare, if it exists at all, in some African and Asian populations. This report might be taken as further evidence that it is a rare disease in Nigeria where only five cases are recorded in over 200 000 patients.

However, in 1921, the Mayo Clinic reported its cases of Paget's disease after 237 000 patient registrations (Porreta, Dahlin & James, 1957). There were fifteen cases of Paget's disease of bone or one in 16 000. This, too, might have suggested that it was a rare disease in Americans but during the past 6 years the Mayo Clinic has recorded one case of Paget's

disease per 900 registrations. Thus, it could be erroneous to conclude that Paget's disease is rare in Nigerians from the present report of only five cases.

It is known that Paget's disease affects older persons. Only three of 1753 cases reported by the Mayo Clinic were less than 30 years old (Porreta *et al.*, 1957). One might therefore expect the relatively young population seen at U.C.H. not to provide a true indication of the prevalence of Paget's disease in Nigeria.

Thus, this report is not intended to prove or disprove the general impression that Paget's disease is rare in Nigerians or Africans, but just to document its existence and to note that our findings are in keeping with previous observation that it is an uncommon disease in Nigerians. Cases of Paget's disease have also been recorded in Lagos, Nigeria (Eyo, 1966, personal communication).

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