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## Femoral head osteonecrosis in primary hypertrophic osteoarthropathy

Primary hypertrophic osteoarthropathy is rare. One patient with primary hypertrophic osteoarthropathy has been described with bilateral hip osteoarthritis,<sup>1</sup> but as far as we are aware osteonecrosis of the femoral head has not previously been reported in this condition. Of 52 patients with primary hypertrophic osteoarthropathy seen in our department, three presented with symptoms relating to femoral head osteonecrosis. In all three cases osteonecrosis developed in both hips over a 3-12 month period, two out of three patients requiring replacements of both hips.

The table presents principal clinical and investigational features of these three patients. Abnormal liver function tests were present in patient 2 (raised transaminases,  $\gamma$ -glutamyltransferase, and bilirubin), which were thought to relate to excessive alcohol intake. Patients 1 and 3 had no other risk factor in their history that might have related to osteonecrosis. Interestingly, all three patients had peptic ulceration. In all three primary hypertrophic osteoarthropathy appeared in childhood or puberty, while osteonecrosis developed in middle age.

The femoral head is a common site of osteonecrosis<sup>2</sup> and as far as we are aware this is the first report of concurrence of

*Clinical, radiographic and scintigraphic features, and laboratory findings of three male patient with aseptic necrosis of the femoral head (ANFH)*

	Patients		
	1	2	3
<b>History</b>			
Familial history	+	+	-
Age of onset PHO* (years)	11	5	12
Age of onset ANFH (years)	50	36	41
Skeletal pain	+	+	+
<b>Symptoms</b>			
Clubbing of hands	+	+	+
Clubbing of feet	+	+	+
Seborrhoea	+	+	+
Hyperhidrosis	+	+	+
Thickening of distal legs	+	+	+
Periarticular swelling of ankles	+	-	+
<b>Radiography</b>			
Periostitis of long bones	+	+	+
Demarcation of anterolateral part of femoral heads	+	+	+
<b>Scintigraphy</b>			
High uptake of radiotracer in both hips	+	+	+
High uptake of radiotracer in long bones	+	+	+

\*PHO=primary hypertrophic osteoarthropathy.

osteonecrosis with primary hypertrophic osteoarthropathy. Although alcohol excess may be incriminated in one of the three cases, in the other two no obvious predisposing factors were apparent. It is generally postulated that the stimulus to new bone formation in primary hypertrophic osteoarthropathy relates to increased local blood flow, possibly related to an endocrine mechanism<sup>3</sup> or neurogenic reflex arc.<sup>4</sup> Alteration in bone perfusion associated with primary hypertrophic osteoarthropathy might thus in some way have predisposed to osteonecrosis in these patients. The three patients described were otherwise typical of primary hypertrophic osteoarthropathy.<sup>5</sup> Occurrence of peptic ulceration in primary hypertrophic osteoarthropathy has previously been described,<sup>6</sup> though the mechanism remains unclear.

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