

Case report

Development of Garrod's pads in the fingers of a professional violinist

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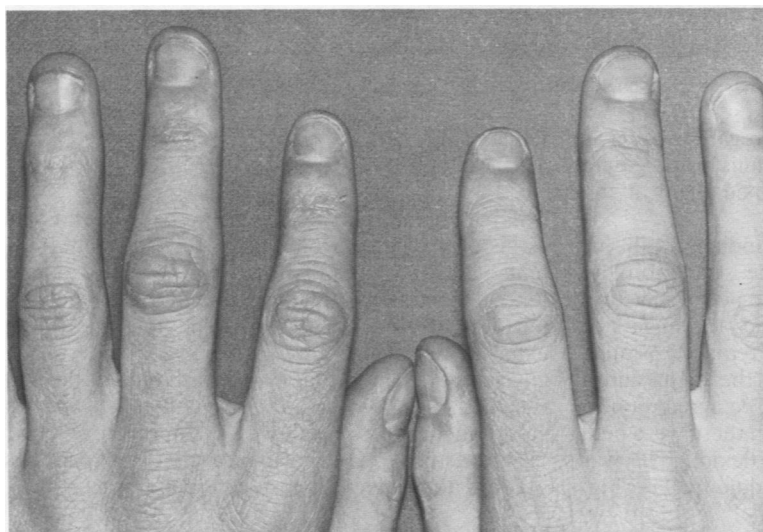


Fig. 1 The hands of a professional violinist show Garrod's pads localised to the proximal interphalangeal joints of the index and middle fingers of the left hand.

Garrod's pads, thickening of the skin and underlying tissues over the interphalangeal joints that can mimic Heberden's and Bouchard's nodes, are thought to be occupational in aetiology and to arise from mechanical factors. In some professional musicians, particularly string players, the functions of the two hands differ markedly. The findings of Garrod's pads isolated to the proximal interphalangeal joints on the middle and index fingers of the left hand in a professional violinist provides an insight into the mechanical factors most likely to produce them.

Case report

A 34 year old professional violinist who played and practised in an orchestra for up to 30 hours a week presented to the rheumatology clinic. He had experienced a variety of musculoskeletal symptoms in the hands that had occurred intermittently during the 20 years he had been playing the violin but had never led to serious deformity or disability. He was anxious that his career might be jeopardised, though full investigations including normal full blood count, erythrocyte sedimentation rate, immunology, and x rays suggested that his fears were ungrounded.

A chance finding was of Garrod's pads localised to the backs of the interphalangeal joints on the index and middle fingers of the left hand (Fig. 1).

Accepted for publication 7 August 1986.

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Fig. 2 The violinist playing his instrument, demonstrating the particular physical strains to which the proximal interphalangeal joints of the middle and index fingers of the left hand are put.

These did not trouble him, and he regarded them as an occupational hazard among violinists since some of his colleagues had also developed them at the same site.

Correlation of these clinical findings with his playing technique showed that the strains on the right hand which held the bow were not particularly great. The function of the left hand, the fingers of which were placed on the strings, required a much greater range of movement in all the digits and a tendency for considerable force to be applied on to the strings through the fingers when these were held in a cramped position of unnatural flexion. This was most marked for the index and middle fingers (Fig. 2).

Discussion

The pathogenetic factor in this individual who acts as his own case control appears to be the intermittent relaxation and contraction of the extensor tendon over an interphalangeal joint that is held in a position of extreme flexion. The tension in the extensor tendon during playing is likely to be considerable, and probably the formation of the pad is a protective mechanism to strengthen the skin and subcutaneous tissues above it. In this particular example there is no evidence that the pad has evolved to protect against external trauma.