1. Introduction to Hypermobility

Historical Background

The first clinical description of articular hypermobility is attributed to Hippocrates, who, in the fourth century B.C., described the Scythians, a race of people inhabiting the region that now forms the Ukraine and Czechoslovakia, as having humidity, flabbiness and atony such that they were unable to use their weapons. Their main problem in warfare was that hyperlaxity of the elbow and shoulder joints prevented them from drawing their bows effectively.

Thereafter, the study of joint hypermobility was ignored until the late nineteenth century, when general physicians were energetically defining medical syndromes, some of which included joint hypermobility as an important feature. Notable amongst these were Ehlers–Danlos syndrome (EDS) and Marfan syndrome.

The last 50 years have seen the recognition of joint hypermobility, without obvious widespread connective tissue abnormality, as a cause of orthopaedic and rheumatological symptoms. In investigations on a small number of subjects Finkelstein (1916) and Key (1927) noted a familial predisposition to lax joints. Subsequently, orthopaedic surgeons recognised the importance of generalised joint laxity in the pathogenesis of dislocation of a single joint. Congenital dislocation of the hip was investigated by Massie and Howarth (1951) and Carter and Wilkinson (1964). Carter and Sweetnam (1958, 1960) studied dislocation of the patella and dislocation of the patella and shoulder. Thereafter, generalised joint laxity was recognised as being more common than had previously been realised. This led to the introduction of simple clinical scoring systems for measuring joint laxity in affected individuals and populations.

The first report of an association between joint laxity and rheumatological symptoms emanated from Sutro (1947), who described 13 young adults with effusions and pain in hypermobile knees and ankles. Similar clinical observations led Kirk et al. (1967) to define the “hypermobility syndrome” in a group of patients with joint laxity and musculoskeletal complaints. In the absence of demonstrable systemic rheumatological disease, these authors attributed the symptoms to articular hypermobility.
Wood (1971) argued from the epidemiological viewpoint that joint hypermobility should be considered as a graded trait rather than as an “all or nothing” syndrome. This is a simplistic concept and there is general agreement amongst colleagues with clinical experience that the category “loose-jointed persons” contains not only those at the upper end of the normal spectrum but also examples of familial articular hypermobility syndromes (see Chaps. 6 and 10).

During the past decade there has been increasing recognition of the importance of inheritance of joint laxity in the pathogenesis of a variety of rheumatological problems. This process has given impetus to the study of many aspects of hypermobility, including quantification, epidemiology, natural history and syndromic delineation. In particular, biomolecular studies are beginning to elucidate the underlying basic defects (Child 1986). Nevertheless, current understanding of hypermobility is far from complete and continued academic interest can be foreseen.

**Development of Concepts Concerning Rheumatological Manifestations**

It is apparent that symptoms arising from lax joints may commence at any age. In their classic paper, Kirk et al. (1967) described 24 patients with generalised joint hypermobility. Their symptoms started between the ages of 3 and 55 years, and three-quarters had problems before the age of 15. Females were more frequently affected than males. Symptoms were mainly in the lower limbs, the commonest being pain in the knees and ankles, although joint effusions and muscle cramps also occurred. Supraspinatus and bicipital tendonitis, tennis elbow and painful Achilles tendons were also noted.

In a comprehensive review, Ansell (1972) mentioned that symptoms occur after, rather than during, unaccustomed exercise and diminish in later life, perhaps as the joints stiffen. Although the prognosis is good, other arthropathies must be excluded before making a diagnosis of the “hypermobility syndrome”. Thus, in 690 new referrals to a paediatric rheumatology unit, hypermobility was considered to be the final diagnosis in only 12. Most clinicians agree that the condition is underdiagnosed, and with greater awareness many patients with “growing pains” in childhood are likely to be recognised as hypermobile.

Some persons consider themselves to be “double jointed” or “loose limbed”. There is often a family history of loose joints, and they may be talented at activities such as ballet dancing (see Chap. 9). By contrast, symptomatic patients are sometimes labelled as neurotic when medical practitioners who are unaware of the syndrome are unable to explain their symptoms.