
This monograph reports an extensive analysis of 424 case records relating to aplasia of the radius, collected from the literature, together with a clinical investigation of forty-seven patients, radiographic analysis of an additional seventeen cases, and the results of dissection of seven limbs with aplasia of the radius of varying degrees. Cases are grouped into the categories of total and partial aplasia, and hypoplasia of the radius. The operative treatment of thirty-two limbs is described, and it is concluded that a method of treatment aiming at arthrodesis is justified from a cosmetic viewpoint only, and should be confined to unilateral cases with normal or only slightly reduced function in the other hand. Two patients were treated by transplantation of the proximal part of the fibula at the age of six months. Experimental removal of the radius in rabbits produced a deformity like that of aplasia of the radius in man. In four animals transplantation of the proximal part of the fibula to the radial bed prevented marked radial abduction in the radiocarpal joint; the transplant fused with the ulna despite the absence of internal fixation, but the degree of ulnar curvature was not affected. The longitudinal growth of the ulna in aplasia of the radius is little more than half the normal. In animal experiments the fibular graft retains, at the most, half its normal power of growth. Although the method must be finally assessed, it presents theoretical possibilities of a successful result from a fibular transplant.—R. G. HARRISON.


The first part of the investigation deals with the anatomy of the sacro-iliac joint. Unfortunately, only thirty specimens were studied, and it was very difficult, therefore, for the author to add any new concepts. However, the anatomical investigations supported the thesis that the sacrum acts as a keystone, wedged in a downward direction. He confirmed the observation that movement in the sacro-iliac joint takes place around two axes, namely a transverse axis, passing through the body of the second sacral vertebra, and a sagittal axis, passing through the mid point of the symphysis pubis. The author's studies on the range of movements confirmed that it is very small. He did not have the opportunity of studying it at various ages. He found that, on the average, the amplitude of movement around the transverse axis was about 4 degrees, and that the amplitude of movement around the sagittal axis varied between 3 and 19 degrees.

On the clinical aspects of sacro-iliac disease, the author observed that our present radiological techniques do not demonstrate the joint adequately, but he was unable to suggest any particular projections for use in the future. It is interesting that, out of 6,895 patients suffering from low back pain, the diagnosis of sacro-iliac disease was made in only 241. Among these 241 patients there were eight examples of osteitis condensans ili and sixty-seven examples of infections of the sacro-iliac joint; that is to say, there were only 166 patients in whom a diagnosis of a mechanical disorder of the sacro-iliac joint was made.

Unfortunately, no experimental investigation was carried out to establish the pain pattern of sacro-iliac disorders. The diagnosis, therefore, was dependent on somewhat arbitrary criteria, and many of the symptoms and signs ascribed by the author to sacro-iliac insufficiency could well have been presented by a lumbo-sacral disorder; for example, it was stated that a patient with sacro-iliac lesion was able to bend forward more readily when seated than when standing, a phenomenon also observed in lumbo-sacral disorders. In several patients a new diagnosis was made on subsequent examinations. In one instance the diagnosis was changed from sacro-iliac strain to a haematoma of the gluteal muscle, and in yet another case the diagnosis changed to osteoarthritis of the hip. These diagnoses are so divergent as to cast some doubt on other examples of supposedly sacro-iliac strain. Of the thirteen patients treated by arthrodesis, one subsequently required surgical treatment of a prolapsed disc. Possibly the symptoms were due to disc degeneration from the beginning and settled down on the prolonged bed rest required after the sacro-iliac fusion. This section of the monograph makes it clearly apparent that the symptoms and signs which can be fairly ascribed to sacro-iliac disorders should be carefully assessed, and that there is need for experimental work to establish the clinical picture that can be expected to accompany disorders of the sacro-iliac joint.—Ian MACNAB.