preference to the posterior approach. In cases of compression of the medulla and posterior protrusion he also used a transdiscal resection and the arthrodesis technique of Cloward through the anterior approach.

Professor L. Gui describes thoracic disc lesions which up to 1966 totalled only 205. Even the Mayo Clinic records only sixty-one cases. The level of the thoracic spine most affected is T.11 and T.12. Females were more affected than males, and if herniation did exist it was mostly unilateral. The clinical signs and symptoms in this segment of the spine are more difficult to interpret because of its rigidity and the inability of muscle spasm to produce lateral deviation. He never found symptoms from nerve root pressure but did find symptoms and signs of cord compression. Surgical treatment improves only 55 per cent of cases; and 20 per cent of cases were worse after surgery. The best approach is that of Hulme (postero-lateral approach with partial costotransversectomy).

Professor M. Gandolfi deals with lumbar disc lesions, including 4,861 cases operated on in the University Clinic in Bologna: 64 per cent were male and the most affected age was forty to forty-nine years (37.22 per cent). It is interesting that workers were mainly affected (33.44 per cent). Pure lumbago he regards as a separate entity, and the diagnosis of this is not difficult to arrive at from the history given by the patient. He then discusses posterior nerve root compression in great detail, not overlooking the possibility of anatomical anomalies in this part of the spinal column.

In the last paper the legal aspects of disc prolapse are discussed by Professor R. Ricciardi Pollini from Rome. Doctors in Italy, as are those in the rest of the world, are very often in trouble when evidence has to be brought up to date about the working capacity of an injured man who claims back trouble and temporary or permanent incapacity for work.—Alexander I. MANZONI.

Practice of Intramedullary Nailing. By Gerhard KÜNTSCHER, Professor of Surgery and Chief of Surgery, Harbour Hospital, Hamburg, Germany. Translated by Herman H. Rinne, M.D., Sudbury, Ontario, Canada, with a Foreword by Hugh Smith, M.D., Memphis, Tennessee, United States of America. 10 × 7½ in. Pp. xiv + 374, with 505 figures. Index. Appendix. 1967. Springfield, Illinois: Charles C. Thomas, Publisher. Price \$14.

In the minds of many orthopaedic surgeons intramedullary nailing is synonymous with Küntscher nailing. A comprehensive work by Gerhard Küntscher is therefore an important one and an essential volume for an orthopaedic library. The indications for and technique of nailing have been handed from surgeon to surgeon. It is high time that we are reminded of Küntscher's own reasonings. How he must shudder at some of the procedures carried out in his name!

He believes that an intramedullary nail is employed to ensure rigid immobilisation of a fracture and not merely to realign bone ends, and that if fixation is absolute bony union is guaranteed. He maintains that bone grafting in the treatment of fractures is unnecessary and his comments on this deserve careful consideration. This emphasis on the importance of rigid immobilisation for union of a fracture and regaining of joint movement is not new. Küntscher achieves this by closed nailing whenever possible. The number of injuries which he can nail closed is very large, but this is more than can be said for many surgeons. It is not easy. We know that a good way to cause non-union of a fracture is to nail it improperly. However, this work describes the history of the method, its dangers, Küntscher's indications for its use, the technique in general and for individual fractures, in a manner which is perfectly clear. The open exposure of fractures is cursorily dealt with and inadequately described for safety, as for example the description of the exposure of the middle third of the humerus.

One gets the feeling that Küntscher must find a nailing procedure for all appropriate joint and bone surgery. His contributions to the management of femoral, tibial and pathological fractures have received a very wide acceptance and we are indebted to him for these. There are, however, simpler and more satisfactory methods of dealing with pertrochanteric fractures, forearm fractures in children, arthrodesis of hip and knee joints and recurrent dislocation of the shoulder.

This is, however, a most important work and should be read by all who use intramedullary nails. It is a pity the English of the translation is so poor and that there is an excessive use of italics and exclamation marks.—E. L. TRICKEY.

Congenital Malformations. A Report of a Study of Series of Consecutive Births in Twenty-four Centres. By Alan C. STEVENSON, Harold A. JOHNSTON, M.I., Patricia STEWART and Douglas R. GOLDING. Supplement to Volume 34 of the Bulletin of the World Health Organisation. 9½ × 7½ in. Pp. 127, with many tables. 1966. Available through H.M. Stationery Office. Price 12s.

This report records in detail congenital malformations found in stillborn and live infants (total 5,460 patients) collected from the outcome of 421,781 pregnancies. The basic clinical information

from the selected maternity units throughout the world was referred for analysis and tabulation to the Population Genetics Research Unit of the Medical Research Council of Great Britain. The aim of this study was to record the frequency of malformations of specific types and groups of malformations, with particular reference to geographical variations and association with consanguinity of parents. Genetic and other etiological factors relating to congenital malformations and perinatal mortality are also discussed. The findings are conveniently presented in table form and informative discussion on each congenital malformation group makes interesting reading. The information, although of limited immediate interest to orthopaedic surgeons, is nevertheless of fundamental value to clinicians, geneticists and statisticians working in this field. Indeed, the report presupposes that the reader has a sound basic knowledge of the principles of genetics and statistics.

On a point of detail, much of the information confirms well established views, whereas other observations are novel, and as yet not fully accepted. Because of the nature of the study there are some intrinsic disadvantages and deficiencies, as all available information was recorded on the strength of examinations of newborn children. It is pointed out that at least 50 per cent of malformations may not be evident at birth: this particularly applies to congenital heart and other visceral lesions. Furthermore, gross chromosomal defects are seldom detectable at birth and only present later in childhood. Nevertheless this work is invaluable as an exploratory project defining in extreme detail the problems involved, and indicating new avenues of study by specialists in this field.—Robert OWEN.

Foot Disorders—Medical and Surgical Management. By Nicholas J. GIANNISTRAS, M.D., Department of Orthopaedic Surgery, University of Cincinnati, College of Medicine, Cincinnati, Ohio; Chairman, Section of Fractures and Orthopaedics, Good Samaritan Hospital, Cincinnati, Ohio; with twelve other contributors. 10½ × 7½ in. Pp. 521, with 465 illustrations, 3 colour plates and many tables. Index. 1967. London: Henry Kimpton. Price £5 12s. 6d.

In the introduction the author states that "this book is not intended for the orthopaedist who has been in practice for fifteen years or more because he has definite ideas as to what procedures are most effective in his experience. It is intended to be an easy reference book for the newly established orthopaedic surgeon, the resident training in orthopaedics . . ." Perhaps what he says of the practice of established orthopaedic surgeons is particularly true of their treatment of conditions of the foot, but it is to be hoped that those among them who do care to grapple with the comprehensive and, in some parts, closely detailed text of this book may glean some food for thought.

The first four chapters are devoted to the normal development, physiology and anatomy of the foot. The anatomical descriptions are clear and fully illustrated though I was left somewhat confused about the differences, if any, between an everted, valgus and pronated foot. At the end of the section relating to the normal foot a small section concerned with the definition and illustration of some common deformities seems out of place. The quality of the drawings in this section is poor, especially that of a hammer toe, which is unrecognisable, and of talipes calcaneus which is of calcaneo-cavo-valgus.

Most of the next five chapters are concerned with the management of various kinds of flat foot. The author is very energetic in his treatment of flat feet of all kinds, for some of which he advocates plaster correction, Whitman's arch supports and detailed alterations to shoes, the whole programme of treatment being carefully controlled by regular radiological examinations. In his chapter on adolescent foot problems it was a relief to know that "if the child has been under proper and well supervised therapy for his feet during infancy and childhood he has a 75 to 85 per cent chance of reaching adolescence with a well corrected, normally functioning pair of feet. One must realise, however, that in spite of careful conscientious therapy and supervision, approximately 15 per cent of the youngsters treated will not respond to conservative treatment." While his enthusiasm must be respected, some reference to Morley's (1957) findings that in an untreated population 97 per cent of children under eighteen months are flat footed but at ten years only 4 per cent still show a flat foot deformity might be appropriate.

Chapters on club foot, the management of the poliomyelitic foot and the foot in cerebral palsy are balanced, well presented and well illustrated. In the section concerned with the treatment of hallux valgus and hallux rigidus the text opens with the sentence: "The term 'bunion,' or the more sophisticated one 'hallux valgus' still leaves . . ." I wonder whether the Examining Board of the College of Surgeons or the American Board of Orthopaedic Surgery would accept this equivalence. The author has done well to steer a careful course among the various operations that can be used for hallux valgus, though the description of Mitchell's procedure is marred by mislabelling of all the diagrams compared with the references in the written text. In the treatment of hammer toe most British orthopaedic surgeons would use Higgs's spike arthrodesis rather than a method using a Kirschner wire.