A STUDY OF THE CAUSES OF FAILURE IN THE HERNIATED INTERVERTEBRAL DISC OPERATION
AN ANALYSIS OF SIXTY-SEVEN REOPERATED CASES*
JAMES GREENWOOD, JR., M.D., T. H. MCGUIRE, M.D., AND FARISS KIMBELL, M.D.
Department of Surgery, Baylor University College of Medicine and Methodist Hospital, Houston, Texas
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While the percentage of good results following lumbar disc operations is high in the hands of capable neurosurgeons, all must admit a few failures and recurrences. Of 632 patients operated upon by us for herniated disc, 58 have had reoperations. Nine additional patients operated upon received their first surgery elsewhere (total 67). Although this group may seem large, it includes 10 patients reopened while they were still in the hospital and 16 who had an entirely different location for a second herniation. Many were operated upon after several years of complete relief before recurrence of pain necessitated a second procedure. Thus only 32 cases can be assigned to failure of surgery, a percentage of 5.0. An analysis has been carried out in detail with particular reference to the pathology found at the time of the second operation, procedures done to relieve the patient, and the results obtained. We have avoided reference to psychoneurosis as much as possible while fully realizing its importance. It is particularly prominent in compensation cases where the subconscious desire for a large settlement precludes the possibility of cure until this end is attained. Malingering does not have to be considered since such individuals seldom submit to a single operation, much less a second.

A search of the literature disclosed only one contribution (that of Campbell and Whitfield) dealing with the reasons for failure of the disc operation. These authors emphasized psychological and compensation factors as causes for failure. The results of disc operations at L4 were not as good as at L5. Age, duration of symptoms, neurological and orthopedic changes did not seem to be significant. Bradford and Spurling in their excellent monograph urge complete removal of the nucleus to avoid recurrence. Echols has reported an instance of a second disc herniation at a new location, requiring another surgical procedure. While the presence of a bilateral herniation from one disc is rare, and double disc involvement less common, such a possibility must be considered when there is definite myelographic or clinical evidence of multiple protrusion. Of 16 patients reoperated upon, 6 possibly had a second disc at the time of the original operation which might have

been removed if we had not been content to stop with the removal of one herniation.

The results of reoperation have not only been gratifying, but the knowledge gained has enabled us to improve an already acceptable percentage of good postoperative results in cases of lumbar herniated discs. For simplicity in tabulating results, “good” refers to patients who are able to resume their former occupation in comfort. Results classed as “not good” include improved or unimproved patients who must carry on at least with significantly reduced efficiency. Competent orthopedic consultation was freely used and followed in most cases, since it was felt that only through the combined efforts of both specialties could the greatest progress be made.

PATHOLOGY FOUND AT SECOND OPERATION

Of the 67 patients who were subjected to a second operation, 16 had a new herniation either at the side opposite from the previous herniation or at a new level on the same side; 17 had recurrence of cartilage at the same site as the previous rupture; 4 herniations were missed completely at the first operation for one reason or another. Dense adhesions around the nerve root with or without bony encroachment (Figs. 1 and 2) were most common of all and occurred in 24 cases. X-rays were studied from the standpoint of hypertrophic changes, increase or loss of lordosis, and congenital anomalies, so that a comparison of the frequency of occurrence of these factors with that in an average group of operated disc cases might be made.

Particular notice was taken of the fact that at times the pathology was not limited to finding of a herniation at the interspace. In addition there was