it is not justifiable to classify them together as the same entity," they then accepted as "most plausible" the explanation proposed by Rhaney and Barclay. However, Rhaney and Barclay have suggested, as have we, that a common embryological mechanism exists (that is, an abnormal separation of the endoderm from neuroectoderm) for all cysts of this kind, irrespective of their location in relation to the cord. Kwok and Jeffreys' concluding statement that "cervical lesions seem to be associated with more severe congenital abnormalities . . ." is not confirmed by our study on spinal endodermal cysts with no associated anomalies, in which the lesions in 14 (61%) of 23 cases were located in the cervical region.

References


Treatment of Protruded Intervertebral Discs

To THE EDITOR: Dr. Dwight Parkinson is one of the more thoughtful and objective investigators of the use of chymopapain. When he states in his recent review of patients so treated (Parkinson D: Late results of treatment of intervertebral disc disease with chymopapain. J Neurosurg 59:990-993, December, 1983) that he injects only those patients who "would otherwise have been subjected to surgery," I find this completely credible based upon his selection criteria. His practice of limiting treatment to the single symptomatic ruptured disc is a refreshing novelty when many patients are being injected at multiple levels with no evidence at all of nerve root compression. He also frankly recognizes that patients who may experience gradual relief of leg pain for as long as 6 months after injection may well be those undergoing a natural recovery.

The results he reports, however, still leave unanswered questions. Intended as a 12-year follow-up review of the original 33 patients reported in the Journal of Neurosurgery in 1973, Dr. Parkinson's present article concludes that the percentage of patients cured or improved continues at about 70%, and that the percentage results for 200 patients followed 1 to 12 years are "identical" to those from the first series of 33 patients.

The earlier paper indicated that three of those 33 patients had no relief of pain, and surgery was promptly performed. Of the remaining 30 patients, only 20 responded to a questionnaire: these patients were followed for periods of 2 to 18 months. Thirteen of these 20 were free of leg and back pain, four were free of leg pain, and two were worse. A subsequent evaluation extended the original follow-up period by an additional 6 months, and no "significant change in the incidence or degree of improvement" was noted. This implies that there was still no follow-up study on one-third of the patients. Furthermore, it is never mentioned how those particular patients fared right after treatment, while obviously still under observation.

Now, in this present study, the so-called "identical" results for 200 patients reveal that approximately 1% were worse, 65% had recovered completely from leg pain, and 15% had recovered completely from back pain. At the 10-year mark, however, 96% of patients reported recovery, which Dr. Parkinson attributes largely to the natural course of the disease. Assuming an identical nature of the statistics, we still know nothing about the outcome of one-third of the series (or approximately 60 patients). This, of course, presumes that surgery was necessary on about 18 of the 200 patients and that two-thirds of the remainder responded to the questionnaires. We are still left with a large number of patients in whom the initial result is not reported and whose fate remains unknown.

In regard to the patients who were worse following injection, the recent report is confusing. Two of the original 33 patients were worse. If the percentage results for the 200 patients are identical, one would expect that about 12 patients in this group of 200 would also be worse. However, Dr. Parkinson states that only about 1% were worse after treatment — this would mean only two patients, perhaps the same two as in the first series!

Finally, if we do accept a figure of 70% improvement as a direct result of chymopapain injection (which I personally do not), one must ask if Dr. Parkinson still considers this a viable procedure. In the face of such reports as that of Scoville and Corkill, reporting a surgical success rate of 96%, the comparison is almost ludicrous. Not only have many neurosurgeons, following appropriate criteria, duplicated the results of Scoville, and Corkill, but also many patients undergoing surgery are out of the hospital in 3 to 4 days, with immediate relief of leg pain, and back to work in 2 to 3 weeks.

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References

RESPONSE: I wish to thank Dr. Fager for his thoughtful review and critique of our article. Obviously, our most recent report fails to account for the much better results in the follow-up study. These were achieved by our more aggressive and persistent efforts to contact patients, primarily through the use of stamped, self-addressed envelopes, resulting in a greatly increased percentage of response (including responses from patients lost from the original series of 33 patients'). Dr. Fager is correct in noting that the two patients who stated that they were "worse" from the first series are the same two who still report that they are "worse," even though both have been operated on elsewhere since. Both were third-party liability cases.

Inasmuch as patients who required operations during the initial admission in the first series all had completely extruded discs, we tried to avoid injecting chymopapain in any such cases from then on. We recognize that other investigators have reported relief with extruded discs, but such was not our experience.

Regarding the 5% who were lost to follow-up review, it is quite true that most or all of these may have come to surgery elsewhere. As 85% of our patients experienced a considerable amount of post-injection back pain lasting up to 4 days, and as none stayed in the hospital more than 1 day in the second series, any immediate impression of their course is not significant. Those who experienced immediate relief of their leg pain still demonstrated limitation of straight-leg raising, a phenomenon that continues to puzzle us.

It should be mentioned that our follow-up study was based entirely upon the patient's response. The patients present because of pain, and they alone are the ones who evaluate their results. There is no physician input. They have only four choices on the questionnaire: 1) complete recovery; 2) improved; 3) unimproved; and 4) much worse, for each of the three categories of leg pain, back pain, and ability to do usual activities. This avoids hedging over a few degrees of improvement and, hence, may also account for some differences between our series and other reports.

I certainly agree that 70% (actually reported as 75%) is a far cry from 96%; in fact, as Dr. Fager says, almost "ludicrous." None of our surgeons have quite duplicated these marvelous results. Nevertheless, if I had a ruptured disc that did not respond to conservative management, I would have the chymopapain injection, and should that fail, I would come to Dr. Fager for surgery.

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Reference

Air(?) in Epidural Hematomas

TO THE EDITOR: In the recent article by Dr. Cervantes on delayed epidural hematomas (Cervantes LA: Concurrent delayed temporal and posterior fossa epidural hematomas. Case report. J Neurosurg 59:351–353, August, 1983), the computerized tomography (CT) scans in Fig. 2 show black dots in both the temporal and posterior fossa epidural hematoma. We too have noted that all CT scans of epidural hematomas at our hospital have from one to several small extremely black dots that appear to be gas, either on the surface of the epidural hematoma or trapped in its center. These dots serve as a further indication that the hematoma is an epidural rather than an acute subdural hematoma.

An explanation for this CT appearance is difficult, except that the dots appear to be gas trapped in the epidural hematoma. They are not related to fractures of the sinuses since they occur away from any of the air-containing sinuses or the mastoids. This is a curious clinical finding that is only associated with epidural hematomas in our experience.

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RESPONSE: It is true that the presence of what seems to be air trapped in the lesion might be helpful in deciding the location of the hematoma in relation to the dura mater, although it seems reasonable to believe that this could be related to disruption of the continuity of the air-filled cavities of the skull. This has not been true in Dr. Nova's experience is an interesting fact that I think should be investigated further.

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