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RESULTS OF EARLY OPERATIVE TREATMENT OF SCIATICA

By

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Opinions about the indications for operative treatment of sciatica have changed in the last thirty years during which time this treatment has been used. At the beginning the indications were very strict. *Friberg & Hirsch* described the average preoperative duration of the disease as being 4½ years in a series operated between the years 1939-1940 (1946). Since then the indications have been broadened and during the last ten years the opinion has been that operation was indicated if the patient, in spite of 2-3 months conservative treatment with rest and physiotherapy, still had pronounced pain (*O'Connel* 1950, *Söderberg* 1956, *Hirsch* 1957–1958). However, as early as 1947, *Barr* considered that it was possible to operate at an earlier stage. Early operation of prolapsed intervertebral disc was also discussed by *Hirsch* at the same time as he described the primary results of 29 cases operated within two months of the onset of the illness (1957-1958).

To find out if the results of early operation of a prolapsed disc are as good as those achieved after a longer period of conservative treatment, a follow-up investigation was carried out on 41 cases of prolapsed disc, operated in the acute stage. The results of this investigation are described here.

MATERIAL

The series consists of prolapsed discs operated in Falun between the years 1954-1957 and in Uppsala between 1956-1958. The total number of prolapsed discs operated during each period was respectively 360 cases in Falun and 288 in Uppsala. Of these, 23 patients in Falun (6.4 per cent) and 18 in Uppsala (6.2 per cent) were operated early with a history of between 1 and 6 weeks since the onset of the illness

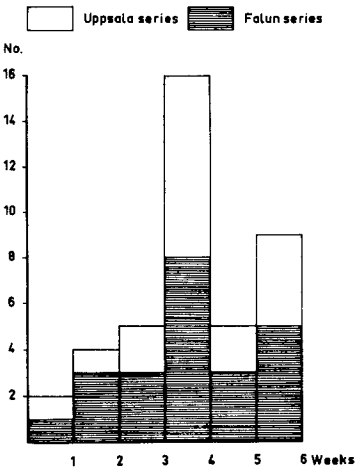

Fig. 1.
Length of illnes before operation.

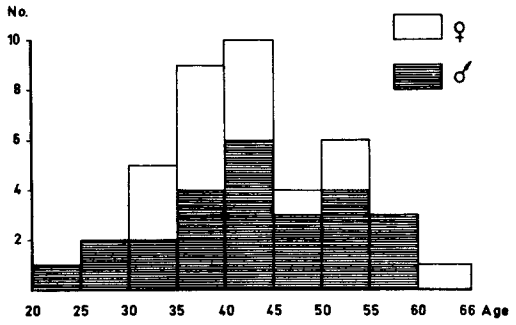

Fig. 2.
Age and sex distribution of the series.

(Fig. 1). Of these 41 patients operated early, 25 were men (61 per cent). The mean age was 42 years, the youngest being 22 and the eldest 66 (Fig. 2). The indication for operation had been persistent, severe pain, combined with pronounced neurological signs in the majority of cases.

Myelography was carried out in 7 of the Falun patients and all of the Uppsala patients.

PRIMARY RESULTS

In the Uppsala series it was possible to confirm the myelography findings at operation in all cases. In five of the Falun patients who

underwent myelography, the roentgen film showed a prolapsed disc and at operation, it was possible to remove it in four patients. In the other two cases the myelogram was negativ but at operation a prolapsed disc was found in both cases. Prolapsed discs were found in 23 out of 24 (95 per cent) cases following positive myelography. The clinical diagnosis with regard to radiation of pain and neurological findings corresponded well with the findings at operation in this series.

The immediate results of operation were very good. There was rapid relief of pain in those 39 cases where a prolapsed disc was removed at operation. One of the two patients where no prolapsed disc was found became rapidly free from symptoms, while the other continued to be incapacitated for 14 months. In the first case myelography was not performed but in the other case it was carried out and was positive. In this case there was certainly a prolapsed disc which the surgeon had missed.

The average time of incapacity before operation was two weeks and the average time in hospital, 19 days. The average time of incapacity after operation was 3 months. Of the patients who had their prolapsed discs removed, 56 per cent were back at work 2,5 months after operation, 79 per cent four months, and 97 per cent six months after operation. All the patients were able to return to their former work.

FOLLOW-UP EXAMINATION

A follow-up examination was carried out between 1,5 and 5 years after operation. One patient had died of another disease. Three patients could not be contacted except by letter. The remainder were medically examined.

The follow-up examination in those cases where the prolapsed disc was removed showed that 22 patients (58 per cent) were completely symptom-free, while 14 (37 per cent) had occasional mild symptoms which, however, did not interfere with their working capacity. The symptoms were localised in part to the leg in eight cases. If symptoms of sciatica only are considered, 28 patients (74 per cent) were completely free of symptoms, while eight (21 per cent) had mild symptoms periodically. One patient had symptoms in the back rather often and was not completely satisfied with the result, while another had had pain in the other leg requiring hospital treatment.

One of the two patients in whom a prolapsed disc was not found at operation, only had mild periodic symptoms in the leg. The other

patient had had a temporary relapse which was treated conservatively and now he had only mild symptoms in the back.

DISCUSSION

The results of the follow-up examination of this series of patients, operated early for prolapsed discs with 58 per cent completely symptomfree 1.5–5 years after operation, is completely comparable with earlier follow-up studies of operated prolapsed discs. *Waris*, at follow-up examination of patients operated for prolapsed disc, found that 41 per cent were symptom-free (1949) while *Lindgren*, in his follow-up examination, found freedom from symptoms in 58 per cent (1949) and *O'Connell* in 60,7 per cent (1950). The present series can also be compared with previous series as regards the frequency of relapse. Lindgren describes a 7 per cent relapse rate, O'Connell a 2,25 per cent, while we in this series had two relapses (5 per cent).

The final results in a conservatively treated series of prolapsed discs does not differ much from results after operation except for the relapse rate which in Söderberg's series amounted to 21 per cent. The difference is greater for the length of hospital treatment and duration of the illness. In Söderberg's conservatively treated series the duration of treatment was 41 days, while the duration in the present series was 19 days, agreeing with results from elsewhere (*Lindgren* 1949). The average total duration of the disease in the conservatively treated patients in Söderberg's series was 10,4 months, while in this series it was 3,5 months. In another series the postoperative time for convalescence following operation for prolapsed disc was 4 months (*Knutsson & Wiberg* 1959) and in this series it was three months.

It therefore seems as if the final results following early operation of prolapsed disc are as good as the results of operation after long conservative treatment. Early operation hardly reduces the time of convalescence, the only gain being the reduction in the preoperative phase. On the other hand, it is well known that conservative treatment can often make operation unnecessary and the question of early operation must therefore be very carefully assessed. It seems advisable to reserve early operation for such cases in which the patient is so ill that conservative measures do not give relief. If early operation is under discussion the diagnosis should preferably be confirmed by myelography (*Hirsch* 1957-1958).

SUMMARY

Forty-one patients with sciatica, operated within six weeks of the onset have been followed-up 1.5–5 years after operation. Fifty-eight per cent of the patients became completely symptom-free and 37 per cent had only mild symptoms periodically.

The indications for early operation of prolapsed disc are discussed. The gain is that preoperative period is shortened, the postoperative convalescence time is the same regardless of early surgery. It is recommended that early operation be therefore reserved for cases with servere pain, where conservative measures do not give improvement.

RESUME

Quarante-et-un malades souffrant de sciatique, opérés dans les six semaines qui ont suivi l'attaque, ont été réexaminés entre 1½ et 5 ans après l'opération. 58 pour cent des malades avaient été entièrement libérés des symptômes et 37 pour cent de légers symptômes périodiquement.

Il est discuté de l'opération précoce dans les cas de hernie discale. On y gagne parce que la période pré-opératoire est moins longue, mais la durée de la convalescence est la même, malgré l'opération précoce. C'est pourquil il est recommandé de réserver l'opération aux cas où les douleurs sont violentes et où un traitement conservateur n'a apporté aucune amélioration.

ZUSAMMENFASSUNG

Einundvierzig Patienten mit Ischias, die innerhalb von sechs Wochen nach dem Beginn der Symptome operiert worden waren, sind 1,5-5 Jahre nach der Operation untersucht worden. 58 Prozent der Patienten wurden komplett symptomfrei und 37 Prozent hatten nur gelegentlich leichte Symptome.

Die Anzeigen für die frühzeitige Operation der prolabierten Wirbelzwischen-scheibe werden besprochen. Die Abkürzung der præoperativen Periode ist ein Gewinn und die Zeit der postoperativen Rekonvalescens ist die gleiche bei frühzeitigem Eingriff. Man empfiehlt daher die Frühoperation für Fälle mit schweren Schmerzen zu reservieren, in denen konservative Massnahmen keine Besserung ergeben.

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