

LENNART SÖDERBERG: Prognosis in Conservatively Treated Sciatica

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Ejnar Munksgaard, Copenhagen 1956
(Author's Abstract)*

An investigation was made of the prognosis of conservatively treated sciatica on the basis of 300 cases. Only relatively severe cases, *i.e.* those admitted to hospital, were included. A special condition for acceptance was the occurrence of neurologic signs.

The author gives a historical review of the various theories presented on the origin of the disease and dwells particularly on the publications of the last two decades in which the authors claim that idiopathic sciatica is practically always due to disc protrusions, especially in the presence of neurologic signs.

The following chapter deals with the most common conservative methods of treatment. According to the author, only immobilisation secured by bed-rest or a plaster jacket can be regarded as a treatment of really therapeutic value. Further, manipulation can occasionally result in temporary or definitive recovery.

The next chapter gives a detailed survey of the prognostic figures for conservative and operative treatment reported by earlier workers in this field. Judging by their figures taken together surgical intervention appears to be superior to conservative treatment. Of their total of 3,551 conservatively treated patients, 39 per cent became symptom-free as against 53 per cent of the 3,928 treated surgically.

The author then presents his own series. The 300 cases that were selected from a material of more than 3,000 cases had been admitted to the departments of Medicine or Orthopedics in Malmö and Lund during the years 1930–1945.

In 276 cases the spine, usually the lumbar section, had been examined roentgenographically at the time of hospitalisation. Of the roentgenograms, those of 193 patients were checked by the author, a special search being made for signs of disc degeneration. The results of these roentgenographic studies are reported elsewhere (*Söderberg & Andrén, Acta Orthopaedica, vol. XXV, 1955*).

Treatment during and after hospitalisation varied widely. The fundamental treatment consisted of bed-rest for a varying period and physical therapy. Only few of the patients had been treated with plaster jacket only.

The investigation was carried out during the years 1953–1954. All of the patients except four were examined by the author personally.

The interval between hospitalisation and the review was 8 to 23 years (average 14.5 years).

The patients were re-examined mainly for the state of the back and neurologic signs and the findings are accounted for in detail.

At the review the course of the disease from initial onset was analysed. The severity and nature of the trouble during the interval between hospitalisation and review was carefully investigated and the data obtained are accounted for during different periods. In addition, a special account is given of the more uniform course of the disease during the first 8 years after hospitalisation.

The analysis may be summarised as follows:

Complete freedom from symptoms during the first 8 years after hospitalisation was noted in 37 per cent and during the interval between hospitalisation and review in 34 per cent.

Occasional mild trouble during the 8-year period was reported by 20 per cent, usually of the type mild *insufficiëntia dorsi* and often reported as occurring only in association with heavy work or on exposure to cold.

Rather constant trouble of varying severity with or without true recurrences was recorded in 33 per cent.

The remaining 10 per cent were patients with recurrences during the 8-year period, but otherwise completely symptom-free or with occasional mild trouble.

The course from the end of the 8-year period until the review varied widely for those not completely free from symptoms (63 per cent). As to those with rather constant trouble (99 patients), improvement to complete freedom from symptoms sometimes occurred despite long duration of the trouble. At the time of review this was noted in 18 per cent (time of review is to be understood as the period during the last 2 years before the reexamination).

At the time of review, 52 per cent of the entire material were completely free from symptoms and 27 per cent had occasional mild trouble, in other words, 79 per cent had no or at most slight trouble, which, however, does not imply that the entire course after hospitalisation was so favourable.

As to different symptoms, sciatic symptoms were reported with a higher frequency than only back symptoms during the first 4 years after the hospitalisation. The frequency of sciatic symptoms decreased

with time. Usually sciatic symptoms were accompanied by back symptoms. The frequency of only back symptoms, however, was fairly steady throughout the period of the investigation.

Of those who were not completely symptom-free at the time of the review (48 per cent), 28 per cent had only back symptoms, 16 per cent both back and sciatic symptoms, and only 4 per cent had only sciatic symptoms.

Comparison of the material divided into various groups showed:

No differences in the later course

between heavy manual workers (134) and light/not manual workers (166);

between patients who at the time of initial onset of sciatica were 30 years (80), 30 to 40 years (121), and above 40 years (99).

Differences in the later course

between those who at the review showed a normal (104), a slightly changed (116) and a pronouncedly changed back. Complete freedom from symptoms was less common and the frequency of only back symptoms higher among those with a pronouncedly changed back;

between those who were completely symptom-free before hospitalisation (104) and the remainder (196). During the 8-year period and up to the time of the review the former were completely symptom-free in higher frequency;

between cases "with indications for operation" (96) and those "without" (132). The frequency of sciatic symptoms during the 8-year period was somewhat higher for the former, but no difference was found as to the severity and nature of trouble at the time of the review. From the time of hospitalisation, the total periods of hospital care and disability were longer, and the frequency of permanently decreased working capacity higher, among the former.

In 40 per cent recurrences occurred between the initial attack of sciatica (lumbago-ischias) and the time of the review. After the time of hospitalisation the frequency of recurrences was about 21 per cent.

Recurrences were most common within the first 5 years of the initial onset of lumbago-ischias.

The frequency of recurrences after hospitalisation proved independent of sex, age at initial onset, occupation or other factors studied.

BERNHARD GETZ: The Hip Joint in Lapps and its Bearing on the Problem of Congenital Dislocation.

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(Author's Abstract)

The aim of the paper has been to investigate whether there are certain anatomical characteristics in the structure of the normal hip joint that may dispose to congenital dislocation. Because this defect is hereditary, the study may also give information about the developmental processes through which the genes manifest themselves in populations and individuals. The investigation is mainly based on an anatomical study of 260 Pappic skeletons of recent time. In this material congenital dislocation of the hip occurred with a frequency of 4.2 %. The frequency in the Norwegian population as a whole is 0.12 %, although the higher frequency in Finnmark county indicates that the condition occurs more frequently in Lapps even today.

Certain anatomical characteristics with regard to the head and neck of the femur (antetorsion, neck-shaft angle) and the acetabulum (depth, inclination in relation to the sagittal and horizontal planes) are studied with respect to age, sex and geographical variations. These characteristics are compared with the corresponding features of a normal material of skeletons from Oslo.

It is found that the femoral antetorsion is large in Lapps and larger in women than in men. Even the neck-shaft angle is large. The antetorsion is considerably larger in the dislocated hips of the material. The normal acetabulum is shallow and the socket is also frontally orientated. This seems to dispose to instability of the joint: Even these traits are most pronounced in women and more pronounced in the normal material from the local groups in which dislocation is most frequent. This is especially evident when the relation between a large antetorsion, a shallow and a horizontally orientated acetabulum is considered.

The frequencies of extreme antetorsion and shallowness of the socket are in conformity with the assumption that dislocation is caused by a coincidence of extreme antetorsion and a shallow aceta-

* Owing to a regrettable error two different supplements were allotted nr. XVIII. This supplement was previously stated to be nr. XVIII b. The Editor considered that this would be best adjusted by allotting nr. XXII to Dr. Getz' study.

bulum. The peculiarities of the hip joint in Lapps are obviously no racial trait, but seems to be a manifestation on the population level of the hereditary factors involved.

In connection with the anatomical studies, the pedigrees of 54 Lappic families in which dislocation occurred and which were presented by Wessel in 1918, are studied and employed as a basis for genetic considerations. In the present Lappic material the sex ratio is about 5:1, in other Norwegian population 4:1 and in Wessel's Lappic material 6:1. The incidence of dislocation in brothers and sisters of affected individuals is 6 % and 38 % respectively. If both hips are considered, Wessel's material comprises in all 94 hips with 69 (22 bilateral and 25 unilateral) or about 73 % affected. The frequency is close to 50 % in the other hip in individuals who have one hip affected against 22 % in hips of affected individuals. If the gene is dominant the expected frequency is 50 %. The observed frequency is 22 % and the probability of manifestation accordingly about 50 %, an assumption which corresponds well with the observed frequency in individuals with one hip affected.

The incidence of dislocation in early children is significantly larger than in late children.

The peculiarities of the hip joint in Lapps are no conclusive evidence that the normal anatomy in this population predisposes to dislocation. A frequency of 5 % dislocated hips corresponds to a frequency of about 20 % of maldeveloped hips without dislocation. The characteristic features of the Lappic hip joint may be due to this 20 % of the population in whom the abnormal genes manifest themselves as maldevelopment without dislocation. The observations may serve as an illustration how pathological genes may express themselves in normal individuals in such a way that the traits may appear as racial ones.