

# RHEUMATOID ARTHRITIS AND PSORIASIS : STATISTICAL STATEMENTS\*

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During the 125 years that have passed since attention was first drawn to a possible linkage between the two disorders of rheumatoid arthritis and psoriasis, this problem has been dealt with in a long series of publications, especially by French, German, and Scandinavian authors. The problem has two aspects, statistical and clinical. Statistically an attempt has been made to find out whether the simultaneous occurrence of rheumatoid arthritis and psoriasis is more than a chance occurrence; clinically, records of cases of simultaneous occurrence of the two disorders are studied to ascertain whether in such cases either or both complaints follow a course different from the usual.

Up to now opinion on these questions has differed widely, and from the results reported it can often be guessed whether the material has originated from dermatological or general medical departments, the different points of view being also reflected in the terminology employed, respectively psoriasis arthropathica and polyarthritis (or polyarthrosis) psoriatica.

The present publication chiefly deals with the statistical aspect of the problem.

Two important recent works on the subject are both from Scandinavia, one by Heinild from Denmark (1942), and one by Romanus from Sweden (1945).

## Heinild's Investigation

On a thorough examination of the literature on polyarthritis psoriatica Heinild found that, in 1942, the statistics comprised more than 300 cases. It is generally said that from 1 to 5 per cent. of cases of psoriasis are associated with articular changes, and from 1 to 5 per cent. of cases of chronic polyarthritis seem to be associated with psoriasis. In his own

material, comprising 271 patients with chronic polyarthritis, Heinild found psoriasis in 3 per cent. of cases, whereas psoriasis did not occur among 270 patients suffering from different arthroses.

## The Investigation of Romanus

On examination of 768 patients with psoriasis Romanus found rheumatoid arthritis in 17 (2.2 per cent.). This is a minimum figure, as Romanus only includes patients who have been hospitalized for their arthropathy; however, on the basis of it Romanus believes he can dismiss the possibility of a linkage between the two disorders because, according to his calculations, the frequency of polyarthritis is not greater in this material than *the calculated total risk* of polyarthritis within the same age groups of the Swedish population as a whole.

## The Present Investigation

The reason why opinions about the possible association between these two disorders still differs so widely is first and foremost that no previous publications have included suitable controls. Such material will be produced here.

The two groups of patients to be compared originate from two municipal hospital departments in Copenhagen, namely the Department of Physical Medicine of the Municipal Hospital, and the Medical Department of the Sundby Hospital. In both departments a special interest was taken in psoriasis and, moreover, the great majority of the patients were observed by the same examiner (Sv. Clemmesen), so that it may be taken for granted that the diagnosis of psoriasis has been established on the same criteria in both groups and that, practically, all cases of psoriasis occurring in the groups have been included in the statement. In addition, the two groups are comparable because the patients originate

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from the same geographical and social milieu, the sex incidence and the curves representing the age incidence being very nearly identical.

The following results have been arrived at. When 10,000 case records with consecutive numbers for the years 1934 to 1938 from the medical department of the Sundby Hospital were studied, the diagnosis of psoriasis was found 43 times (4.3 per thousand), and examination of the records of 1,000 patients treated for chronic polyarthritis in the department of physical medicine of the Municipal Hospital in the course of the years 1941 to 1947 disclosed 31 patients, or 3.1 per cent., with psoriasis. The frequency of psoriasis among patients with rheumatoid arthritis is thus seven times that among patients with general medical disorders.

Now, as is known, both the disorders in question are rife, so that a "chance" coincidence must inevitably occur now and again, but such a preponderance as has been ascertained in this material can be explained only by certain aetiological or pathogenetic factors being common to the two diseases.

As it can thus be considered statistically proved that there is a linkage between the two disorders, we have to leave it to clinical research to find out whether polyarthritis psoriatica constitutes a special clinical entity, in the sense that its course, and thus its prognosis and treatment, differ from those of other forms of chronic polyarthritis.

The simultaneous fluctuations in the affection of the skin and in the arthropathy have been pointed out. However, it is only in a minority of cases that such a parallelism can be shown, and this is true of asymmetrical occurrence, involvement of the terminal joints of fingers and toes (Hench, 1936; Fletcher, 1947), and of a particularly mutilating form which, however, may also occur without simultaneous occurrence of psoriasis (Comroe, 1944).

In a detailed analysis of seventeen of his own cases, Heinild found that the disorder by no means differs from "cases of polyarthritis of common occurrence."

It is just possible that some of the discrepancies may be due to the polyarthritis-psoriatica-group perhaps not being homogeneous, since, as mentioned, some cases may occur as the result of a chance coincidence of the two disorders (and, consequently, cannot be expected to manifest themselves differently from other cases of polyarthritis), whilst other cases must be termed "genuine", expressing the common

causal factors of the disorder of the skin and of the arthropathy.

The modern serological technique with anti-streptolysin titre, agglutination reaction for haemolytic streptococci, etc., will perhaps prove helpful in elucidating the problem. While the agglutination reaction is stated to be positive in from 60 (*Year Book of General Medicine*, 1946) to nearly 80 (Kalbak, 1947) per cent. of cases of rheumatoid arthritis, four out of my eight patients with polyarthritis psoriatica last observed had a negative reaction, two of the four positive reactions being very faint (1/80).

My cases of polyarthritis psoriatica comprised twenty-one women and ten men. In twenty-nine cases the arthropathy was classified as chronic primary (or psoriatic) polyarthritis, in one case as secondary chronic polyarthritis (after rheumatic fever), and in one case as chronic gouty polyarthritis.

No cases of polyarthritis occurred among the forty-three medical patients with psoriasis, but three of the patients had arthroses of the knees, two had gonorrhoeal arthritis, and one had gouty arthritis.

#### Summary

In 10,000 medical patients psoriasis of the skin was found in 4.3 per thousand, while amongst 1,000 patients suffering from rheumatoid arthritis psoriasis was found in 3.1 per cent.

#### REFERENCES

- Comroe, B. I. (1944). "Arthritis and Allied Disorders." Third Edition. London.  
 Fletcher, E. (1947). "Medical Disorders of the Locomotor System." Edinburgh.  
 Heinild, S. (1942). *Bibl. f. Laeger*, 134, 313.  
 Hench, P. S. (1936). *Ann. intern. Med.*, 10, 754.  
 Kalbak, K. (1947). *Annals of the Rheumatic Diseases*, 6, 230.  
 Romanus, T. (1945). *Acta Derm. Vener.*, 26, Suppl. 12.  
 "Year Book of General Medicine." (1946.) Chicago. p. 44.

#### La Polyarthrite Chronique Progressive et Psoriasis de la Peau; Considerations Statistiques

##### RÉSUMÉ

En 10,000 malades médicaux psoriasis de la peau a été trouvé en 4.3 pour mille, tandis qu'en 1,000 malades souffrants d'arthropaties infectieuses psoriasis a été trouvé en 3.1 pour cent.