

## The antiquity of psoriatic arthritis

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The antiquity of rheumatoid arthritis has been the subject of a great deal of discussion in the last two decades. It is still not clear whether the disease had already been identified before 1800, when Augusto Jacob Landré-Beauvais (1), a doctor at the Salpêtrière hospital in Paris, in front of a commission chaired by Pinel, talked about a thesis entitled “Doit-on admettre une nouvelle espèce de goutte sous la dénomination de goutte asthénique primitive?”, in which he described a new condition that had all the characteristics of rheumatoid arthritis. Several arguments - the incontestable lack of references in the medical and non-medical literature and in the iconography before the 19th century - placed rheumatoid arthritis as a disease of relatively recent times (2). In the last few years the research of the American paleopathologist Bruce Rothschild (3) has suggested that perhaps the origins of rheumatoid arthritis are in the New World, however the problem still remains open regarding Europe.

The history of psoriatic arthritis has received much less attention. Psoriatic arthritis is a chronic inflammatory rheumatism associated with psoriasis, of which there are various subsets. Amongst these there is a polyarticular form which is different from rheumatoid arthritis apart from a few radiologic aspects that have recently emerged (4), because of the presence, or at least the familiarity of psoriasis and because of the absence of the rheumatoid factor. There had been a long heated debate between those who believed that psoriatic arthritis - just as ankylosing spondylitis - should be considered as a simple variant of rheumatoid arthritis (the “lumpers”) and those who considered it to be a separate/autonomous disease (the “splitters”). After it was proved that psoriatic arthritis is sero-negative for the rheumatoid factor (5) and that there is an association with the HLA-B27 antigene (6), it is evident that we are dealing with a disease which is different from rheumatoid arthritis. However, it is also evident that, from a historical point of view, psoriatic arthritis could not have been identified before rheumatoid arthritis.

There is another reason why it was very difficult to trace the history of psoriatic arthritis further back in time. Even if it is possible to find some references to psoriasis in the Old Testament, the term “psora” or “psoriasis” is found, for the first time, in the works of Dioscoride Pedanio in the first century B.C. and derives from the Greek “ψώρα”, meaning “to scrape”, referring to the lesions caused by scratching (7). However, until relatively recent times, psoriasis had been confused with leprosy and, of which was considered to be a non-contagious and non-multifocal variant, so-called “lepra Graecorum” or “leprous psoriasis”, depending on whether it was a discoidal, localised form or a confluent polycyclic form (8). The term “lepra”, referring to psoriasis, was still used at the beginning of the nineteenth century in the classic description by Robert Willan (1757-1812) (9) and, only about fifty years later, Ferdinand von Hebra (1816-1880) (10) established, once and for all, that psoriasis and leprosy are two completely different diseases.

Therefore, it is not surprising that psoriatic arthritis began to be talked about only in the nineteenth century, especially by French dermatologists. In 1818, Jean Louis Marc Alibert (1768-1837) was the first to identify a connection between the “poussées” of psoriasis and some articular manifestations of an inflammatory nature (11). Camille Melchior Gilbert (1797-1866) (12) and Pierre Louis Alphée Cazenave (1795-1877) (13) reported other cases of psoriasis with rheumatic problems, but believed that this was due to a coincidence rather than an association. The existence of a real association between the two diseases was, instead, perceived by Alphonse Devergie (1798-1879) in 1848 and particularly by Pierre Ernest Bazin (1807-1878) (Fig. 1) in the period between 1860 and 1870 (15). Bazin was the first to introduce the term “psoriasis arthritica”, which was later to have great success, especially in the dermatological field. However, it must be noted that he had classified all the dermatological conditions into two groups, arthritic and herpetic, in a more

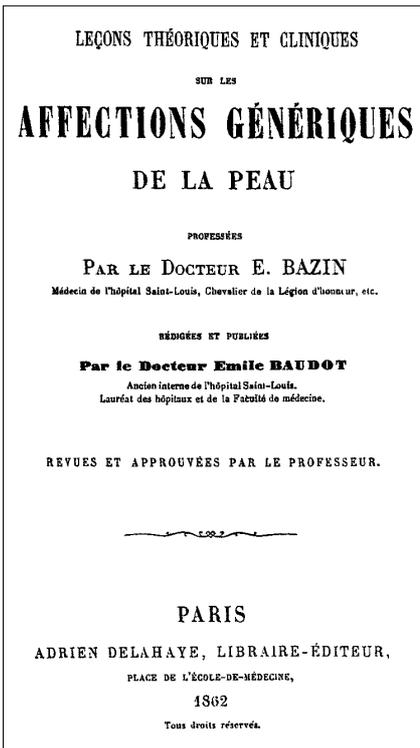


Fig.1. Title-page of Bazin's text book.

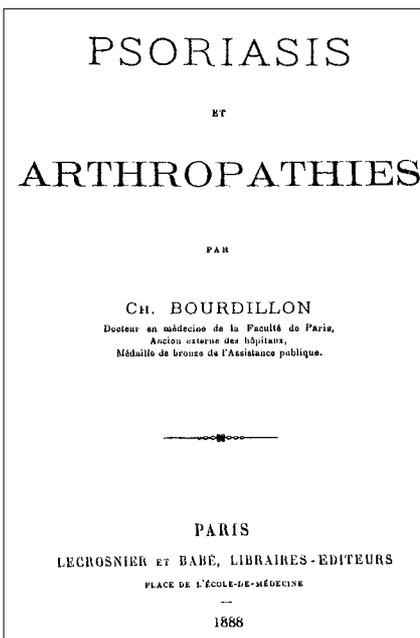


Fig.2. Title-page of Bourdillon's thesis

conceptual than pragmatic system. In this regard, the definition of psoriatic arthritis does not correspond to the present one, but only to one specific subset of psoriasis, as opposed to "psoriasis d'artreux" which would instead be associated with a different diathesis, of the so-called "herpetides" (16). Finally, in 1888, Charles Bourdillon, in



Fig.3. Illustration of a case of arthritis taken from Bourdillon's thesis.

his doctorate thesis (17) (Fig. 2), put together a large, and mainly personal, case study of subjects with arthropathy associated with psoriasis and highlighted some of the peculiarities of psoriatic arthritis, such as the frequent localization in the interphalangeal distals of the hands and feet, and the sometimes invalidating characteristic of the disease, as can be observed from the illustration of one of the most significant cases (Fig. 3).

As we have already stated, it is very difficult, if not impossible, to trace observations of psoriatic arthritis before the 19th century, but there are a few isolated exceptions. In 1981, the English paleopathologist Janet Rogers, described a 13th century Saxon skeleton, discovered in archeological digs in Towbridge, Wiltshire, with manifest diffuse arthritis, ankylosis of the interphalanges and radiologic "pencil in a cup" erosions, typical of psoriatic arthritis (18). Later, the same group found two more skeletons in English cemeteries with evidence of spondyloarthritis associated with peripheral arthritis, with the characteristics of psoriatic arthritis (19). In the same way, in 1992, Ronald A. Bloom and Patricia Smith suspected a case of psoriatic arthritis (or alternatively, arthritis associated with inflammatory intestinal disease) in a skeleton found in the Israeli necropo-

lis of Ein Gedi, dating back to approximately 2000 years ago (20). In 1896 Joe Zias and Piers Mitchell described two skeletons found near the Byzantine monastery of Martyrius in the Giudean desert, dating back to the 5th-6th century AD, in which there were clear signs of arthritis mutilans (21), one of the subsets of psoriatic arthritis.

Another approach to the retrospective diagnosis of psoriatic arthritis is the one adopted by Antonio Castello-Ojuga and Inigo R. Hernandez in 1989 (22). In the biography of Brother Pedro de Urraca, a missionary in Perù during the period of Spanish colonisation, written by Felipe Colombo in 1674, it is reported that he had gout and leprosy. In reality, by carefully reading the description of the disease it is easy to suspect that, instead, it was psoriatic arthritis: the painful symptomatology is described as polyarticular and continuous, the fingers were deformed "contra el natural" and the skin was covered in scales "a modo de las de un pescado", of the size of finger nails.

In 2002, in this journal, the Gino Fornaciari paleopathology group in Pisa reported the case of the so-called "Dama con le trecce" (the Braids Lady), a natural mummy of the 16th century discovered during restoration work of the church of St. Francis of Arezzo (23). The results of the anatomical-radiolog-

ical analyses (which this mummy underwent) indicated rheumatoid arthritis but, in the editorial comment (24), Bruce Rothschild made an alternative hypothesis of spondyloarthritis, basing this on the features of the erosions which were both central and marginal, on the new bone formation and peri-articular sclerosis and on increased subchondral trabeculae. Obviously, the widespread peripheral arthritis should point towards the rheumatoid-like subset of psoriatic arthritis, a suspicion which one of us (G. P.) had referred to Fornaciari even before publication. The last case refers to Piero de' Medici, father of Lorenzo il Magnifico, known as "il Gottoso" (the gouty man). The disease of the Medici's is still a point of controversy today. In 1955, during the restoration work of the Medici Chapel in the sacristy of the church of San Lorenzo in Florence, the skeletons of the Medici were x-rayed and, on the basis of this, Antonio Costa and Giorgio Weber (25) formulated the suspicion that they had suffered from ankylosing spondylitis. Recently, Ugo Carcassi (26), on re-examing the x-rays, came to the conclusion that Piero could have been affected by psoriatic arthritis, since there were widespread alterations, both destructive and ankylosing, to the hands and feet and, according to his biography, he is said to have suffered from "rogne pruriginose" in his forties. These hypotheses are fascinating but they do not seem to be very realistic for several reasons: psoriasis does not cause itching; psoriatic lesions are not normally itchy; furthermore, the x-rays of the spinal column, rather than with ankylosing spondylitis, are compatible with a diagnosis of DISH (27),

a condition which was relatively frequent in gout (28).

The small number of cases in which a retrospective diagnosis of psoriatic arthritis has been made imposes a great deal of caution in formulating a definitive judgement. However, there is certain evidence that this disease is "more antique" than rheumatoid arthritis in the Old World.

### References

1. LANDRÉ-BEAUVAIS AJ: Doit-on admettre une nouvelle espèce de goutte, sous la dénomination de goutte asthenique primitive. *Thèse Méd Paris* 1800.
2. MARSON P: La "question" reumatoide: malattia antica o recente? *Reumatismo* 1988; 40: 237-41.
3. ROTHSCHILD BM, WOODS RJ, ROTHSCHILD C, SEBES JJ: *Semin Arthritis Rheum* 1991; 22: 181-7.
4. EL-KHOURY GY, KARHOL HM, BRANDSER EA: Seronegative spondyloarthropathies. *Radiol Clin N Amer* 1996; 34: 343-57.
5. WRIGHT V: Psoriasis and arthritis. *Ann Rheum Dis* 1956; 15: 348.
6. MOLL JMH, HASLOCK I, MACRAE L, WRIGHT V: Association between ankylosing spondylitis, psoriatic arthritis, Reiter's disease, the intestinal arthropathies, and Behçet's syndrome. *Medicine (Baltimore)* 1974; 53: 343.
7. SCHADEWALDT H: Zur Geschichte der Psoriasis. In: *La storia della medicina e della scienza tra archivio e laboratorio. Saggi in memoria di Luigi Belloni* (Cimino G, Taccagni C Eds). Firenze, Leo S. Oschki Editore, 1994: 149-55.
8. PROFETA G: Trattato elementare delle malattie cutanee in Italia. Palermo, Tip. G.B. Gaudiano, 1881.
9. WILLAN R: Description and treatment of cutaneous diseases. London J. Johnson, 1796-1808, v 1: 152-88.
10. HEBRA F: Hautkrankheiten. In: *Handbuch der speziellen Pathologie und Therapie* (Virchow R Ed), Erlangen, Ferdinand Ende, 1860, v 3.
11. ALIBERT JL: Précis théorique et pratique sur les maladies de la peau. Vol. 2. Paris, Caille et Ravier, 1818.
12. GILBERT CM: Traité des maladies spéciales de la peau. Paris, Baillière, 1839.

13. CAZENAVE PLA: Abrégé pratique des maladies de la peau. Paris, Labé, 1847.
14. DEVERGIE A: Traité pratique des maladies de la peau. Paris, Victor Masson, 1854.
15. BAZIN E: Leçons théoriques et cliniques sur les affections cutanées de nature arthritique et dartreuse, considérées en elle memes et dans leurs rapports avec les éruptions scrofulieuses, parasitaires et syphilitiques. Paris, A. Delahaye, 1860.
16. MARSON P, RONDINONE R, PASERO G, ZANCHIN G: Skin-rheumatism conundrum: the pioneering contribution of Pierre Bazin (1808-1878). *Clin Exp Rheumatol* 2006; 24 (Suppl. 40): S94.
17. BOURDILLON C: Psoriasis et arthropathies. *Thèse Méd Paris*, 1888.
18. ROGERS J, WATT J, DIEPPE P: Arthritis in Saxon and medioeval skeletons. *Br Med J* 1981; 283: 1668-70.
19. ROGERS J, WATT J, DIEPPE P: Paleopathology of spinal osteophytosis, vertebral ankylosis, ankylosing spondylitis, and vertebral hyperostosis. *Ann Rheum Dis* 1985; 44: 113-20.
20. BLOOM RA, SMITH P: On the antiquity of the seronegative spondyloarthropathies. Evidence from ancient Judea. *Skeletal Radiol* 1992; 21: 111-4.
21. ZIAS J, MITCHELL P: Psoriatic arthritis in a fifth-century Judean desert monastery. *Am J Phys Anthropol* 1996; 101: 491-502.
22. CASTILLO-OJUGAS A, HERNANDEZ IR: Description of psoriatic arthropathy in the 17th century. *Arthritis Rheum* 1989; 32: 812-3.
23. CIRANNI R, GARBINI F, NERI E, MELAI L, GIUSTI L, FORNACIARI G: The "Braids Lady" of Arezzo. A case of rheumatoid arthritis in a 16th century mummy. *Clin Exp Rheumatol* 2002; 20: 745-52.
24. ROTHSCHILD BM: Not the Lucy, not the one. *Clin Exp Rheumatol* 2002; 20: 741-3.
25. COSTA A, WEBER G: Le alterazioni morbose del sistema scheletrico in Cosimo dei Medici il Vecchio, in Piero il Gottoso, in Lorenzo il Magnifico, in Giuliano Duca di Nemours. *Arch De Vecchi Anat Pat* 1955; 23: 1-69.
26. CARCASSI U: I Medici di Cafaggiolo: genio e sregolatezza. *Reumatismo* 2003; 55 (Suppl. 5): 212-21.
27. LÉCA AP: Histoire illustrée de la Rhumatologie. Paris, Dacosta, 1987.
28. SCHILLING F, SCHACHERL M, GAMPA, BOPPA: Die Beziehungen der Spondylitis hyperostotica zur Konstitution und zur Stoffwechsel Störung. *Med Klin* 1965; 60: 165.