

Early Onset of Chronic Rheumatic Disease May Lead to Creative Expression: The Stories of Antoni Gaudí and Maud Lewis

FLORENCE A. AESCHLIMANN, MD, Division of Rheumatology, Department of Pediatrics and Medicine, The Hospital for Sick Children, and University of Toronto, Toronto, Ontario, Canada; ANDRÉ G. AESCHLIMANN, MD, RehaClinic Bad Zurzach, Bad Zurzach, Switzerland; RONALD M. LAXER, MD, FRCP(C), Division of Rheumatology, Department of Pediatrics and Medicine, The Hospital for Sick Children, and University of Toronto, Toronto, Ontario, Canada. F.A. Aeschlimann was supported by grants from the Rhyner-Bangerter Foundation, Starr-Foundation, Swiss League against Rheumatism, and Foundation W! Address correspondence to Dr. F.A. Aeschlimann, The Hospital for Sick Children, Division of Rheumatology, 555 University Ave., Toronto, Ontario M5G 1X8, Canada. E-mail: florence.aeschlimann@sickkids.ca. *J Rheumatol* 2016;43:1436–43; doi:10.3899/jrheum.151191

Many famous artists had rheumatic diseases. Among them, the popular French impressionist painter Pierre-Auguste Renoir, the Russian expressionist painter Alexej von Jawlensky, and the French fauvist and “painter of the light” Raoul Dufy were diagnosed with rheumatoid arthritis (RA), and Paul Klee, a highly renowned Swiss-German painter, with systemic sclerosis. Their medical histories have been widely discussed, and they are examples of how creative art may help in coping with the disease^{1,2,3,4,5,6}. Autoimmune diseases such as RA seem to occur with a higher frequency in artists, and exposure to toxins, such as those found in painting materials, and smoking have been discussed as contributing factors^{7,8,9}.

Would a chronic inflammatory pediatric rheumatic disease possibly influence artistic work? Juvenile idiopathic arthritis (JIA) and other chronic rheumatologic conditions with childhood onset have a significant effect on health-related quality of life and physical function, imposing a societal and psychological burden, especially in the prebiologic era¹⁰. Art therapy has been shown to be beneficial in adults and children with chronic diseases by reducing stress and pain and enabling the expression of the cognitive and emotional ideas of the patients^{11,12,13,14,15}.

To our knowledge and in contrast to the many artists with adult-onset autoimmune rheumatic conditions, there are only 2 famous artists with known chronic pediatric rheumatic diseases: Antoni Gaudí, the unique Catalan architect, and Maud Lewis, one of Canada’s best known and most loved folk art painters. The medical literature discussing Gaudí’s articular symptoms is scarce and we are not aware of any publication on Lewis’s medical history^{16,17,18}. Dufy experienced an episode of self-limited arthritis in childhood, but he remained healthy until he was diagnosed with classic RA at the age of 57³. Pediatric rheumatic diseases have been depicted in different artworks including paintings by Sandro Botticelli and Caravaggio; however, there is no proof of pediatric rheumatologic illness in the artists themselves^{19,20}.

The purpose of our report is to present the pediatric illness

of 2 famous artists and to discuss the possible influence of their diseases on their creative artwork. We also discuss how having a chronic illness in childhood may lead to increased creative expression later in life.

Antoni Gaudí i Cornet

Antoni Gaudí i Cornet was born in 1852 in a rural setting in the south of Catalonia, Spain. Little information is available on Gaudí’s childhood; it is known that since the age of 6 years, he experienced recurrent articular symptoms mainly involving his ankles. The disease was treated with a vegetarian diet, abundant water intake, and diverse homeopathic therapies. The doctors ordered strict rest; he was told that otherwise he would die prematurely²¹. Gaudí wore espadrilles (with an upper part made from cotton or linen, and rubber soles) and 2 pairs of socks to absorb his steps and diminish the impact on the joints¹⁶. The joint pain kept him from playing childhood games with his friends and instead Gaudí stayed close to home. He spent much time alone, exploring the surrounding natural world and observing the shapes and figures of plants and animals. As an old man, Gaudí wrote: “With the flowerpots, surrounded by vineyards and olive groves, cheered by the clucking of the hens, the song of the birds and the buzzing of the insects, and with the mountains of Prades in the distance, I captured the purest and most pleasant images of nature, that nature that is ever our Mistress”²².

Little is known about Gaudí’s medical history. It is not clear whether pneumonia preceded the onset of joint pain²¹. One biography emphasized that he had “rheumatoid arthritis” and was sometimes so crippled that he needed to be transported by a donkey²¹. There is no evidence of ocular or cutaneous disease, and the recurrent episodes of joint pain seemed to be limited to his ankles and feet²¹. Because he was able to kneel at Mass, his knees were likely not severely involved and photographs at later age do not show any sign of joint deformities (Figure 1)¹⁶. The disease underlying Gaudí’s articular symptoms cannot definitely be determined; however, JIA with oligoarticular disease course or enthe-



Figure 1. Antoni Gaudí during the Corpus Christi procession in front of Barcelona's Cathedral, 1926. Copyright La Sagrada Família, Barcelona, Spain; with permission.

sitis-related arthritis seem likely diagnoses because the joint involvement was episodic, temporarily restricting his activities and limited to his ankles and feet^{16,23}. Even though rheumatic fever was common in the 19th century, this diagnosis is unlikely because the arthritis is usually migratory, and cutaneous, cardiac, and neurologic symptoms are often associated. These findings were not described for Gaudí. Noninflammatory conditions such as hypermobility need to be considered because they might cause a similar clinical picture.

After graduating in architecture from a renowned university in the emergent city of Barcelona, Spain, Gaudí rapidly developed his own original, innovative style that he constantly maintained in dialogue with nature. He preferred to use near-natural forms and ornaments resembling flora and fauna (Figure 2 and Figure 3). Gaudí built many unique

monuments, among them the basilica of La Sagrada Família in Barcelona, and left a permanent mark on 20th-century architecture.

His influence can be found in the work of many other artists and architects²⁴. Le Corbusier, one of the pioneers of modern architecture, had this to say after visiting Barcelona in 1928: "What I had seen in Barcelona was the work of a man of extraordinary force, faith and technical capacity, manifested throughout his life in the quarry, that of a man having stone carved before his very eyes from really masterly drawings. Gaudí is 'the' constructor of 1900... Gaudí was a great artist"²⁵.

Gaudí died in 1926 at the age of 74 after he was hit by a trolley car. He was buried in the crypt of the unfinished Sagrada Família, on which he had been working unremittingly during the last few years of his life²⁶.



Figure 2. Left: La Sagrada Família, Barcelona, Spain. Right: Spiral staircase in the Sagrada Família. As a great observer of nature, Gaudí applied the spiral shapes found in the animal kingdom to generate the power of gravity in his architecture. Copyright La Sagrada Família, Barcelona, Spain; with permission.

Maud Lewis

Maud Lewis was born in Nova Scotia, Canada, in 1903. From very early childhood she experienced debilitating articular symptoms, and one biography emphasized multiple birth defects that had left her shoulders unnaturally sloped and her chin resting on her chest²⁷. Her family was affluent and Lewis's childhood was happy and carefree despite her illness. She enjoyed spending time at her home with her family and highlighted their excursions on Sunday afternoons in one of her interviews many years later: "We used to go on beach picnics, the whole family, they're all gone now"²⁷.

Lewis's school attendance was irregular, and it was her illness rather than the lack of teachers in those days that prevented her from attending school. She was bullied by other children for her physical deformities and this eventually influenced her decision to leave school at age 14 after having completed grade 5²⁷.

Considering the early onset of her disease, the disease course, and the documentation of articular swelling and deformities on photographs, Lewis most likely had polyarticular JIA. There is no evidence of fever or cutaneous involvement as seen in systemic JIA. In 1967, an article was published about Lewis in *The Atlantic Advocate*, suggesting that poliomyelitis had caused the deformities in her hands and arms²⁸. However, the involvement of both temporomandibular joints, causing micro- and retrognathia, and the pattern of joint deformities documented in various photographs are classic sequelae in patients with untreated, longstanding active JIA (Figure 4, top). To our knowledge, there is no information documented on any treatment of her illness.

Lewis started her artistic career by selling self-made Christmas cards with her mother. However, after her parents' deaths, her life changed dramatically. At age 34, she married the fish peddler Everett Lewis and moved into a small 4.1 m × 3.8 m house. By marrying Everett Lewis, she accepted a life of simplicity and thrift. While accompanying her husband on his daily rounds peddling fish, her cards sold better and better, and Lewis began to paint pictures. She painted on

beaverboards, baking tins, shells, and stones — and on almost every available surface in their tiny house. Her physical disabilities and poverty prevented her from extensive traveling; she spent her entire life within a 1-h drive of her birthplace²⁹. She never took a painting lesson and did not know any works of art. Seated in a chair by the window, Lewis painted day after day, holding the brush with her right hand and placing her left wrist under her right arm for support (Figure 4, bottom)²⁷.

She mostly painted the simple activities of rural life: flowers, colorful cats, deer, and teams of oxen with big smiling eyes and eyelashes sticking out. Her paintings were friendly and illuminated by her courage, determination, humor, and optimism (Figure 5)^{30,31}.

With increasing demand, worsening of the disease, and impairment of her physical mobility, her later works became simpler and Lewis, feeling obliged to fulfill the customers' requests, started to use cutouts, explaining why many of the figures in her last paintings have exactly the same size and shape. Her health began to deteriorate after a fall and subsequent fracture of the femoral neck. She died of pneumonia in July 1970. Having become quite famous at the end of her life, her burial was attended by all local dignitaries, and among the sympathy cards was one from Richard Nixon, the US president at that time^{27,32}.

DISCUSSION

We present 2 famous artists, their childhood illness, and the way they successfully coped with it. Gaudí and Lewis, despite obvious contrasts in their work and in the character of their careers, shared 2 important commonalities: they were both born and raised in rural surroundings, and were limited in their mobility early in life as a result of a childhood-onset chronic rheumatic condition. They both incorporated naturalistic elements into their artistic work, and their childhood experiences seem to have influenced the evolution of their artistic style. While Gaudí was inspired by the complex organic shapes of nature, exploring and applying the static



Figure 3. Casa Batlló, Barcelona, Spain. Copyright Casa Batlló S.L.U., Barcelona, Spain; with permission.

forces of nature in the structure of his buildings, Lewis painted the joyful childhood memories of rural life activities with a friendly and illuminated naturalist approach, both thematically and technically^{24,27}.

The relationships between chronic illness, isolation in childhood, and creativity have previously been discussed³³. Chronic illness and isolation are not essential conditions for the development of creativity, and most famous artists did not have chronic diseases during childhood. However, many painters were diagnosed with RA later in life, and their chronic rheumatic disease evidently influenced their work^{3,6}. It is possible that chronic illness and isolation could also be involved in promoting creative ability and artistic expression in children.

The early years of Gaudí's life could have been essential in the development of 2 of his major skills: observational power and nature analysis¹⁶. "The great book, always open and which we should make an effort to read, is that of Nature," he used to say²². He was inspired by the geometry of the animal, plant, and mineral kingdoms, and was trying to continuously establish a relationship with nature. "Creation works ceaselessly through man. But man does not create, he discovers. Those who seek out of the laws of Nature as support for their new work collaborate with the Creator"²¹.

Lewis wanted to brighten and lighten up her surroundings and painted just out of the pure joy of life. Her happy childhood formed the basis of her artistic work later in her life and by painting her memories, she struggled against adversity and overcame difficulties with her arthritis and poverty. While she was small and frail, her paintings revealed the simple strength, beauty, and happiness of the world she saw. Renoir recognized the satisfaction and happiness related to his painting after having experienced more than 25 years of severe, disabling RA: "The pain passes, but the beauty remains"³⁴. Similar to Renoir's artistic work, Lewis's paintings remained fresh, friendly, and colorful.

A possible relationship between chronic childhood illness and the development of artistic style has also been suggested for artists who had nonrheumatic chronic childhood diseases. Henri de Toulouse-Lautrec had a rare genetic syndrome, possibly pycnodysostosis, which seems to have influenced his artistic life, as suggested by Hodder, *et al*³⁵. Similarly, Frida Kahlo's art is permeated by her physical and psychic suffering, which started in her late childhood and continued throughout her life³⁶. Shainess has analyzed different factors that were found in creative children and appeared to influence the development of creativity³³. She described the creative child as a keen observer with curiosity and the ability to memorize. Further, creative children seemed to tolerate isolation and loneliness well and she considered these conditions as often necessary for developing skills such as creativity³³.

Some scenes that Lewis painted — even though childhood memories — did not happen exactly the way they were shown. Subtle contradictions such as fluffy pink blossoms on

evergreen trees reflect her light-heartedness, humor, and her own vision of beauty (Figure 5, bottom)³¹. Lewis painted folk art, a naive, untutored art style. Even though folk art was popular at that time and used by other, healthy artists who achieved artistic prominence, her simplistic style could have resulted from her impaired physical mobility, limiting the elaboration of more complicated and sophisticated shapes²⁷. Despite their simplicity, her paintings were full of happiness and color. She painted the world as she saw it, as through a child's eyes: a world without shadows³⁰.

Similarly, Gaudí embellished his work by the use of his colorful fairy tale-like imagination. A representative example of his fanciful work is the Casa Batlló in Barcelona, a very functional building inspired by an emblematic marine dream world. The entire facade has an undulating surface reflecting water waves, and the stone columns are in the form of bones. The roof of the building has the shape of a dragon with iridescent scales, and the spine forms the ornamental top (Figure 3)³⁷. It seems that both Gaudí's and Lewis's works were influenced by their infantile vision of artistic beauty that they kept throughout their personal development.

Gaudí and Lewis were both born in an era when treatment options were very limited and biologics did not exist. While Gaudí's disease seemed to be limited to recurrent painful episodes of joint pain without obvious longterm sequelae, Lewis's arthritis led to early and severe articular deformities. Nowadays, both would benefit from potent medication and their disease would most probably have a different course^{38,39,40}. But we wonder whether the world of art would have remained the same.

ACKNOWLEDGMENT

We thank Cathy Pajunen, Thomasin Adams-Webber, Jane Darch, and Cheri Nickel for their valuable support with the literature research. We are indebted to The Art Gallery of Nova Scotia, especially Shannon Parker and Beth Brooks, who gave permission to reproduce Lewis's paintings and the photographs of her, and to the basilica of La Sagrada Família and the Casa Batlló, who gave permission to reproduce the photographs of Gaudí and his works.

REFERENCES

1. Aeschlimann A, Michel BA. [Art and rheuma]. [Book in German] Wädenswil: Verlag Stutz AG; 2012.
2. da Mota LM, Neubarth F, Diniz LR, de Carvalho JF, dos Santos Neto LL. Pierre-Auguste Renoir (1841-1919) and rheumatoid arthritis. *J Med Biogr* 2012;20:91-2.
3. Kahn MF. Raoul Dufy's rheumatoid arthritis. *Rev Rhum Engl Ed* 1998;65:499-503.
4. Zeidler H. ["Memories of my sick hands": life and medical history of the painter Alexej von Jawlensky]. [Article in German] *Z Rheumatol* 2011;70:336-57.
5. Zeidler H. Great artists with rheumatoid arthritis. What did their disease and coping teach? Part II. Raoul Dufy and Niki de Saint Phalle. *J Clin Rheumatol* 2012;18:431-6.
6. Zeidler H. Great artists with rheumatoid arthritis: what did their disease and coping teach? Part I. Pierre-Auguste Renoir and Alexej von Jawlensky. *J Clin Rheumatol* 2012;18:376-81.
7. Kahn MF, Bourgeois P, Aeschlimann A, de Truchis P. Mixed connective tissue disease after exposure to polyvinyl chloride. *J Rheumatol* 1989;16:533-5.



Figure 4. Top: Maud Lewis in her little home. Bottom: Lewis at work, 1965. Photographs copyright Bob Brooks; with permission.



Figure 5. Some paintings by Maud Lewis. Top left: *Untitled [Songbirds in Apple Blossoms]*. Undated, oil on paperboard. Top right: *Team of Oxen in Winter*. 1967, oil over graphite on pulpboard. Bottom: *Untitled [Grazing Oxen in the Spring]*. Around 1965, oil on masonite. Copyright Art Gallery of Nova Scotia, Halifax, Nova Scotia, Canada; with permission.

8. Pedersen LM, Permin H. Rheumatic disease, heavy-metal pigments, and the Great Masters. *Lancet* 1988;1:1267-9.
9. Kahn MF, Bensimon-Kyriaco C, Bourgeois P. Renoir and Dufy [letter]. *Lancet* 1988;ii:337.
10. Moorthy LN, Peterson MG, Hassett AL, Lehman TJ. Burden of childhood-onset arthritis. *Pediatr Rheumatol Online J* 2010;8:20.
11. Makin S, Gask L. 'Getting back to normal': the added value of an art-based programme in promoting 'recovery' for common but chronic mental health problems. *Chronic Illn* 2012;8:64-75.
12. Stuckey HL, Nobel J. The connection between art, healing, and public health: a review of current literature. *Am J Public Health* 2010;100:254-63.
13. Bitonte RA, De Santo M. Art therapy: an underutilized, yet effective tool. *Mental Illn* 2014;6:5354.
14. Beebe A, Gelfand EW, Bender B. A randomized trial to test the effectiveness of art therapy for children with asthma. *J Allergy Clin Immunol* 2010;126:263-6, 266.e1.
15. Savins C. Therapeutic work with children in pain. *Paediatr Nurs* 2002;14:14-6.
16. Azevedo VF, Diaz-Torne C. The arthritis of Antoni Gaudí. *J Clin Rheumatol* 2008;14:367-9.
17. Hinojosa-Azaola A, Alcocer-Varela J. Art and rheumatology: the artist and the rheumatologist's perspective. *Rheumatology* 2014;53:1725-31.
18. Smith JM. Oxen and logging wagon (1): Maud Lewis. *JAMA* 2014;312:2596-7.
19. Dequeker J. Arthritis in the paintings of Sandro Botticelli. *Arthritis Rheum* 1984;27:1196-7.
20. Espinel CH. Caravaggio's "Il Amore Dormiente": a sleeping cupid with juvenile rheumatoid arthritis. *Lancet* 1994;344:1750-2.
21. van Hensbergen G. Gaudí: a biography. New York: HarperCollins; 2003.
22. Gaudí & Natura [permanent exhibition]. Barcelona: basilica of La Sagrada Família; 2008.

23. Petty RE, Southwood TR, Manners P, Baum J, Glass DN, Goldenberg J, et al; International League of Associations for Rheumatology. International League of Associations for Rheumatology classification of juvenile idiopathic arthritis: second revision, Edmonton, 2001. *J Rheumatol* 2004;31:390-2.
24. Zbasnik-Senegacnik M, Kuzman MK. Interpretations of organic architecture. *Prostor* 2014;2:290-301.
25. Valles J. Gaudí. Barcelona: Editorial R M Paseo San Gervasio; 1958.
26. Haupt S, director. *Sagrada - el misteri de la creació* [motion picture]. Zürich: Fontana Film GmbH; 2012.
27. Woolaver L, Brooks B. *The illuminated life of Maud Lewis*. Halifax: Nimbus Publishing Limited/Art Gallery of Nova Scotia; 1996.
28. McCoy D. Frail woman with a bold brush. *Atlantic Advocate* 1967;57:36-9.
29. Barnard M. The little old lady who paints pretty pictures. *The Star Weekly* (Toronto) 1965 Jul 10.
30. Beaudry D. *Maud Lewis: a world without shadows* [motion picture]. Toronto: National Film Board of Canada; 1976.
31. Bogart JE, Lang M. *Capturing joy: the story of Maud Lewis*. Toronto: Tundra Books; 2011.
32. Digby's artist, Mrs. Maude Lewis dies. *The Chronicle Herald* (Halifax) 1978 Aug 1.
33. Shainess N. The roots of creativity. *Am J Psychoanal* 1989; 49:127-38.
34. Auguste Renoir Gallery. Pierre-Auguste Renoir (1841-1919). [Internet. Accessed March 22, 2016.] Available from: www.renoirgallery.com
35. Hodder A, Huntley C, Aronson JK, Ramachandran M. Pycnodysostosis and the making of an artist. *Gene* 2015;555:59-62.
36. Budrys V. Neurological deficits in the life and works of Frida Kahlo. *Eur Neurol* 2006;55:4-10.
37. Casa Batlló Gaudí Barcelona. [Internet. Accessed March 22, 2016.] Available from: www.casabatllo.es
38. Lovell DJ, Giannini EH, Reiff A, Cawkwell GD, Silverman ED, Nocton JJ, et al. Etanercept in children with polyarticular juvenile rheumatoid arthritis. Pediatric Rheumatology Collaborative Study Group. *N Engl J Med* 2000;342:763-9.
39. Lovell DJ, Ruperto N, Goodman S, Reiff A, Jung L, Jarosova K, et al; Pediatric Rheumatology Collaborative Study Group; Pediatric Rheumatology International Trials Organisation. Adalimumab with or without methotrexate in juvenile rheumatoid arthritis. *N Engl J Med* 2008;359:810-20.
40. Otten MH, Anink J, Prince FH, Twilt M, Vastert SJ, ten Cate R, et al. Trends in prescription of biological agents and outcomes of juvenile idiopathic arthritis: results of the Dutch national Arthritis and Biologics in Children Register. *Ann Rheum Dis* 2015; 74:1379-86.