WHAT CAN A RHEUMATOLOGIST LEARN FROM PAINTINGS?

Jan Dequeker, MD, PhD*

My interest in old paintings and medicine started 30 years ago after a statement in scientific publications in 1964 and 1974, that rheumatoid arthritis may have originated in the New World and entered the Old World after 1492[1,2].

The absence of a convincing description of the disease has been continuously argued as firm evidence against the existence of rheumatoid arthritis before the 18th century in European populations.

Insight in the pathology may be enhanced through perspectives provided by the history of disease. Visual arts, especially in combination with historical documentation of personalities, can be an important tool for paleopathological research[3].

Living in a country famous for its old masters, I rose to the challenge of looking at our ancient paintings. For a rheumatologist, hands very often play a diagnostic role. Therefore I started looking with a magnifying glass at catalogues and reproductions of paintings, trying to find hand lesions resembling those of rheumatoid arthritis.

I soon discovered a number of deformities resembling those of someone with longstanding arthritis, and later also features of many more than 200 other diseases never described before, which will be published in a book on diagnosis through the artist's eyes[4]. The pictorial evidence of the existence of chronic rheumatic diseases before the 19th century is summarized in Table I.

Although a work of art may provide evidence of ancient disease, the interpretation may be extremely difficult. Errors of diagnosis are commonly made either by seeing disease where none exists, or by interpreting at face value a pathological appearance that is only the expression of an artistic convention, e.g. mannerism. This is especially true when studying hands, since painters use them as a powerful expression of feelings, or they may be the hallmark of a particular school. In several paintings of the 1400-1600 period, especially of the school of Rogier van der Weyden in Flanders, and of Sandro Botticelli in Italy, the fingers are particularly fine and long, the middle and fourth finger closed together and the little finger often shows a crooked deformity (clinodactyly).

The portrait of a youth by Botticelli (1483) is an example of a painter hallmark misinterpreted as juvenile arthritis[5,6].

An exact diagnosis of a medical disorder is traditionally based on knowledge, skills and attitude. The adage that you don't see what you don't know is basic for medical education.

In interpreting observed alterations in paintings in order to come to a clinical diagnosis should be based on careful reasoning using cognitive tactics and strategies of the clinician, problem solver.

A clinical diagnosis based on careful reasoning of a disorder as represented in a painting thus may still be valid in our present time, despite the lack of technical confirmation or absence of medical history. The latter is in some cases possible by retracing written historical documents.

The advantage of visual arts, for example paintings, as a tool for paleopathological research compared to skeletal remains is that skin and other soft tissue alterations such as swellings, colour, contractions and joint luxation, resulting in discomfort and disabilities can be discerned and detected by an experienced clinician.

Many of the great artists have been attracted to scenes of medical nature, the physician, the patient, the medical school, the healing of the sick. Given the artist's inevitable interest in the dramatic and uncommon, the attraction is not surprising.

Commissioned portraits often included recognized disease states incidental to the painting, which at the time were sometimes only considered a part of the subject's personality. With his trained eye for detail and his inherent curiosity in his fellowmen, it was natural for the artist in the time before photography to paint what he saw at least if he preferred not to obscure reality by flattery. In many instances, contemporary physicians can diagnose accurately the disease conditions portrayed in old paintings, and the medical records thus compiled

Department of Rheumatology, University Hospitals K.U.Leuven, Herestraat 49, B-3000 Leuven, Belgium

Table I. Pictorial evidence of the existence of chronic rheumatic diseases before the 19th century.

Disease	Period	Artist	Painting	Ref.
Rheumatoid arthritis	Mid 15th century	Anonymous Flemish/Dutch	Temptation of St. Anthony	7
	1620-1622	J. Jordaens	The Painters Family	8
	1631	C. C. Moeyaert	Portrait Siebrandus Sixtius	9
Juvenile idiopathic arthritis	1108	Caravaggio	The sleeping cupid	10
Reactive arthritis (Poncet's)	1484	S. Botticelli	The birth of Venus	6
Ankylosing spondylitis (spondylarthropathy)	1335	Anonymous	Christ healing the Innocent	11
	1517	Q. Metsijs	Portrait Erasmus	12
	1684	S. Blankaart	Title page S. Blankaart's thesis – Podagra…	3
Polymyalgia/Temporal Arteritis	1436	J. Van Eyck	Holy Virgin with Canon van der Paele	13
Systemic Sclerosis	1680	B.E. Murillo	Archangel Raphael and Bishop Domonte	14
Osteoarthritis (hands)	1432	J. Van Eyck	Adoration of Lamb. Panel St. John Baptist	14
	ca 1600	F. Hals	Portrait of Sara Andriesche Hessir	4
Hypermobility syndrome	1638-39	P. P. Rubens	The three Graces	15
Paget's disease	1500	Q. Metsijs	A grotesque old woman	16
Osteoporosis	1490-95	V. Carpaccio	Arrival of the English Ambassadors	17
Arthrogryposis	1500	H. Bosch	The procession of the cripples	18
Gout	1743	W. Hogart	Mariage à la Mode "Settlement"	4-19
Charcot joint	1500	H. Bosch	The procession of the cripples	18
Hyperlipidemia	1506	Leonardo da Vinci	Mona Lisa	20
Hodgkin's disease	ca 1560	M. Van Reymerswaele	The money-changer and his wife	21

make a valuable addition to history.

What can rheumatologists learn from paintings?

I have learned

- that artists are good observers and that they could record diseases and syndromes long before scientists described their observations in medical journals;
- that visual arts are a good source for paleopathological research; that paintings are a good tool for testing our observational skills and clinical reasoning capacities;
- that rheumatologists probably have a greater interest in art and medicine than any other specialist;
- that some patients with severe rheumatic disease have been great artists, as A. Renoir (rheumatoid arthritis), P. P. Rubens (gout), P. Klee (systemic sclerosis), R. Dufy (rheumatoid arthritis), M. Asim Khan (ankylosing spondylitis), J. Clijsters (juvenile idiopathic arthritis), M. Angelo (osteoarthritis), M. Pirquin (rheumatoid arthritis), F. Aerts (ankylosing spondylitis);
- that art therapy is a good pain killer; there is no better pain killer than an occupied mind;.
- that Hippocrates' aphorism "life is short but art is long" is still reality.

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