Medical History

Arthritis in Flemish paintings (1400-1700)*

J DEQUEKER

British Medical Journal, 1977, **1**, 1203-1205

Summary

A close examination of the hands of people depicted in paintings of the Flemish school showed that in five paintings there were figures with hand lesions resembling those of rheumatoid arthritis. Although none of the deformities or swellings are indisputable examples of rheumatoid arthritis, they do at least suggest that the painters must have been confronted with rheumatoid-like lesions in their models. In two other paintings there were signs of rheumatic fever and of temporal arteritis.

No arthritic lesions were found in the works of painters of the Italian Renaissance, probably because they are less detailed. The finding of rheumatoid deformities in the Flemish paintings does, however, question the general belief that rheumatoid arthritis is a condition that has arisen relatively recently.

Introduction

Rheumatoid arthritis was first clearly described by Landré Beauvais in 1800. Before then there are no convincing medical reports of the disease,[1] except perhaps the description of the arthritis of Constantine IX (980-1055), who suffered a progressive inflammatory polyarthritis with disease of the soft tissues and increasing deformities.[2] Ankylosing spondylitis with or without affected peripheral joints was, however, fairly common in the ancient world.[1]

The art of the past is a suitable avenue in which to explore the existence of rheumatoid arthritis or rheumatoid-like lesions before 1800, although several authors have commented on the absence of rheumatoid deformities in painting or sculpture before 1800.[3 4] Nevertheless, living in a country that possesses a collection of Flemish paintings I rose to the challenge of looking at our ancient paintings with a rheumatological eye.

Methods

Hands are often said to indicate rheumatological diseases. I therefore started looking through catalogues and reproductions of paintings with a magnifying glass, trying to find hand lesions resembling those of rheumatoid arthritis.

*Based on a lecture delivered at the annual general meeting of the Heberden Society, London, on 28 November 1975.

Rheumatology Unit, Academic Hospitals, Katholieke Universiteit Leuven, Belgium

J DEQUEKER, MD, FRCP ED, professor

Results

I soon discovered that a painting in my own city showed rheumatoid-like lesions. The hand of Christ in a painting by Jan Rombauts (circa 1500) resembles that of someone with longstanding rheumatoid arthritis (fig 1).

Encouraged by this finding, I searched further and discovered that several other Flemish painters had depicted people with arthritic hands.

The famous portrait of Federigo de Montefeltre, thought to have been painted by Joos (Justus) van Gent, shows arthritis of the proximal interphalangeal joint of the left index finger. The third metacarpophalangeal joint of the same hand may also be affected (fig 2).

In the drawing by Jan van Eyck (circa 1441) John IV, Duke of Brabant, who was one of the founders of Leuven University, clearly has swan-neck and boutonnière deformities of the right fingers (fig 3).

In Jacob Jordaens's (1593-1678) painting of his own family the housemaid's hands seem to be affected by rheumatoid arthritis. The second and third metacarpal and proximal interphalangeal joints are swollen (fig 4).

The man in the painting *The Donators* (1525-30) by Jan Gossaert, also called Mabuse, seems to have polyarthritis of the fingers of his left hand, although Dupuytren's contracture may be an alternative explanation. He has flexion deformities of the second, fourth, and fifth fingers (fig 5).

During my search for rheumatoid lesions I did not see any joint deformities that looked convincingly like Heberden nodes or the lesions of gout. Two other paintings, however, did attract my attention. The young sick woman in the painting by Jan Steen (1626-79) might have rheumatic fever (fig 6). She seems to be very ill, feverish, and orthopnoeic. She also has a facial bloss; her left arm seems to be paralysed with a diffuse swelling of the hand; and the doctor is measuring her pulse rate. All these features suggest a diagnosis of acute rheumatism complicated by mitral valve disease. More indirect evidence of inflammatory rheumatism, polymyalgia rheumatica, is found in the painting by Jan van Eyck (1436) of the holy virgin with Canon van der Paele, who was the donor of the painting (fig 7). The Canon clearly has temporal arteritis, with scar forming and hair loss at the eyebrow and before the left ear. He also has a dermal cellular naevus and a sebum cyst at his left ear.

Discussion

Clearly, one has to be careful in making medical deductions from painters' representations. 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. It is well known, for example, that in several of the paintings of Rogier van der Weyden the fingers are particularly fine and long, and the little finger often shows a clinodactyly deformity. It is also well known that most of El Greco's figures have Marfanoid features. The deformities I have described here, however, are not of this kind. They are incidental to these painters' styles, except perhaps for the hands in the painting of Jan Gossaert, which are probably an example of a mannerism of this painter. Similar hand deformities may be seen in a

FIG 1—(Left) Jan Rombauts: *Christ appearing to St Peter*. Leuven, Stedelijk Museum. Detail (above) shows signs of longstanding rheumatoid arthritis in Christ's right hand.

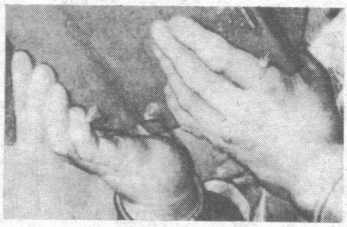

FIG 2—(Right) Joos (Justus) van Gent: *Federigo de Montefeltre*. Urbino, Ducal Palace. Detail (above) shows arthritis in proximal interphalangeal joint of left index finger.

FIG 3—Jan van Eyck: *John IV, Duke of Brabant*. Rotterdam, Museum Boymans-van Beuningen. Swan-neck and boutonnière deformities of the fingers of the right hand may be seen in this drawing.

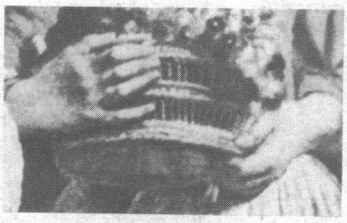

FIG 4—(Right) Jacob Jordaens: *The painter's family*. Madrid, Prado. Detail (above) shows housemaid's hands; second and third metacarpal and proximal interphalangeal joints are swollen.

FIG 5—(Right) Jan Gossaert (Mabuse): *The donators*. Brussels, National Museum. Detail (below) shows deformities of man's left hand.

FIG 6—Jan Steen: *The sick woman.* Amsterdam, Rijksmuseum.

FIG 7—Jan van Eyck: *Holy virgin with Canon van der Paele.* Bruges, Gemeentemuseum.

portrait of a woman (Rijksmuseum, Amsterdam) and in the painting of a man with a rosary (National Gallery, London), both of which are attributed to Gossaert.

The monoarthritis of the proximal interphalangeal joint of Federigo de Montefeltre might be due to tuberculous arthritis; gout; or a variant of the so-called seronegative peripheral arthritis that is seen in Reiter's disease, arthritis associated with gastrointestinal disease, psoriasis, and ankylosing spondylitis. In all these conditions except tuberculous arthritis, however, the proximal interphalangeal joint is rarely affected. In tuberculous arthritis tumour albus or spina ventosa is typical.

The polyarthritis of the small hand joints seen in four paintings was present or visible in only one hand and not with certainty in the other. The feet were visible in only one painting and there they were normal. Therefore there was no absolutely convincing evidence of symmetrical rheumatoid arthritis. All but one of the people with arthritis were men, which is in contrast with the normal female:male ratio of rheumatoid arthritis.

Although I looked for arthritis in the work of other Renaissance painters, and that of Breughel, van Dyck, Rembrandt, Jerom Bosch, Rubens, and David, I found no more arthritic deformities. It is not due to chance that people with arthritis are shown in Flemish paintings but not in those of the Italian Renaissance. The Flemish painters were portraitists with a feeling for natural scenes, which they liked to reproduce in a realistic, detailed way. They also often included in their paintings a portrait of their patrons, and, quite accidently, some of the rheumatic signs have been found in these portraits of patrons. The painters of the Italian Renaissance had more fantasy and paid less attention to detail, and their pictures were more lively. It is thus less likely that rheumatic lesions would be found in their paintings.

Although none of the described deformities or swellings are indisputable examples of rheumatoid arthritis, they do at least suggest that the Flemish painters must have been confronted with rheumatoid-like lesions in their models. And this casts doubt on the general belief that rheumatoid arthritis has arisen comparatively recently.

I am grateful to Professor R Van Schoutte, laboratory of art, Université Catholique Louvain, for his critical advice and to Mr A Rummens for the excellent photographic reproductions.

References

[1] Short, C L, *Arthritis and Rheumatism*, 1974, **17**, 193.
[2] Caughey, D E, *Annals of the Rheumatic Diseases*, 1974, **33**, 77.
[3] Snorrason, E, *Acta Medica Scandinavica*, 1952, **142**, suppl No 266, p 115.
[4] Boyle, J A, and Buchanan, W W, *Clinical Rheumatology*. Philadelphia, F A Davis, 1971.

What are the long-term dangers for athletes who take anabolic steroids?

Hepatocellular carcinoma has been described in patients after long-term ingestion of anabolic steroids, usually for the treatment of aplastic anaemia, and this must be considered as a risk in athletes.[1] Reversible hypertension[2] and testicular atrophy with impotence and azoospermia have also been reported. Cholestatic jaundice is another side effect,[3] but is rarely severe and is often only biochemically evident. Finally, acne is common and masculinisation frequent in women.

[1] Farnel, G C, *et al*, *Lancet*, 1975, **1**, 430.
[2] Freed, D L J, *et al*, *British Medical Journal*, 1975, **2**, 471.
[3] Perez-Mera, R A, and Shields, C E, *New England Journal of Medicine*, 1962, **267**, 1137.

What is the treatment for a naevus in childhood?

I presume that this refers to melanocytic naevi. Treatment may be necessary for three reasons: (*a*) cosmetic, (*b*) malignant change, and (*c*) malignant potential. The first is the most common. A parent is usually worried about an unsightly naevus on an exposed area. There are no general rules about the timing of removal, and each case must be treated on its own merits. It is tricky to give a child under 10 years old a local anaesthetic, but general anaesthesia is not indicated for the removal of a trivial skin lesion. Unless there is noticeable enlargement of the lesion with body growth, delayed excision (under local anaesthetic) seems preferable. Liaison between practitioner and plastic surgeon may be necessary in borderline problems.

Malignant change in a naevus is quite exceptional before puberty, and is rarely a cause for concern. Nevertheless, sudden increase in size, change in colour, bleeding, and ulceration all call for prompt excision and microscopic examination. The experienced doctor should be able to distinguish these from the phase of growth, associated with papillation and hyperkeratosis, which often occurs in naevi in late childhood and adolescence. Malignant change may occur in a few large pigmented naevi that are present at birth. Sometimes surgical removal of such large birth marks is not feasible, but a plastic surgeon should advise soon after birth. There is still considerable controversy whether trauma starts malignant change. There are not enough surgeons to remove all naevi on soles and areas exposed to friction, but I have found that the parents of children who worry about these are reassured only by the removal of the lesion.