CHRONIC ABSORPTIVE ARTHRITIS OR
OPERA-GLASS HAND:
REPORT OF EIGHT CASES

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Opera-glass hand, la main en lorgnette, has been described as a very rare condition. The term has been used only occasionally, but the disease to which it refers is neither so rare nor of such recent origin as is usually assumed. The present paper calls attention to reports of the same disorder under a variety of names, and describes eight additional cases from the authors’ experience.

Cases from the Literature.—Marie and Léri (1913) described a 66-year-old woman with curious deformities of the hands. She had had generalized rheumatoid arthritis (rhumatisme deformant generalisé) for 28 years. Photographs of the hands showed that the fingers and wrists were shortened and contracted and the skin wrinkled, redundant, and thrown into transverse folds, giving the impression that the phalanges were retracted one into the other like an opera glass (les phalanges étaient rentrées en lorgnette les unes dans les autres). Dissection revealed that the phalanges had lost their normal shape, the regular cylinders had become irregular truncated cones, the articular ends had completely disappeared. These changes had been seen in a radiograph which showed similar absorption of bone at the distal ends of the radii, ulni, carpals, and metacarpals, and marked radiolucence of all the bones. Microscopic examination showed massive degeneration of bones, cartilage, and muscles sparing only the blood vessels, nerves, and tendons. The authors mentioned another patient with a similar deformity limited to one finger.

The term “doigts en lorgnette” was used by Brumpt (1906) to describe a deformity seen in a Sudanese Negro. The history was unreliable because of the ignorance and superstition of the patient and his associates. A line drawing of the hands showed most of the fingers to be markedly shortened, the skin soft and redundant, and the bones obviously shortened and distorted. The author stated that the fingers could be drawn out like a lorgnette and made to assume their normal length. The right ring finger and the left thumb and little fingers were normal. The hands were useless and the muscles were weak but not paralysed.

Weigeldt (1929) described a 64-year-old woman with “mains en lorgnette” whose arthritis began at 46. The photograph showed hands similar to those described by Marie and Léri. The published radiograph showed extensive bone destruction. A case published by Nelson (1938) showed similar areas of bone destruction and absorption. A parathyroid adenoma was discovered at autopsy,
Fig. 1.—Case 1. (B.O., male, 22.) Deformities of wrists, shortening of thumbs, distortion of all fingers with flexion deformities and lateral deviations of the proximal joints. Skin is loose, redundant, thrown into folds on the thumbs.

Fig. 2.—Case 1. Carpal bones practically disappeared. Distal ends of ulni come to a point. Ends of most of bones blunted or cupped out.
but whether this had any physiological significance might be questioned, since during the patient’s last illness the serum calcium was 10.7 mg. per 100 ml., serum phosphorus 2.9 mg. per 100 ml., and phosphatase 3.6 units. Crain (1941) believed his case to be unusual because it was the first to be reported in a male. He was not aware of Brumph’s patient.

The literature has also disclosed several cases showing extensive absorption of bone which have been variously called psoriatic arthritis, arthritis mutilans, and arthritis absorbans.

Adrian (1903) described a patient with psoriatic arthritis in which the radiographs showed extensive bone absorption involving the interphalangeal joints of all the fingers, and a similar but less extensive process in the distal interphalangeal joints. The metacarpal joints and the wrist joints were not seriously involved. The radiographs of the feet showed absorption of many bones of the toes. Shlionsky and Blake (1936) published radiographs of a case of psoriatic arthritis in which bone absorption was so extensive in the hands and feet as to suggest leprosy. Nielsen and Snorrason (1946) described four cases of arthritis mutilans with photographs and radiographs showing absorption such as has been described above. Fox and van Breemen (1934) reproduced radiographs of the hands showing absorption and fusion of the carpal bones, extensive absorption and subluxation, and grotesque deformities of the metacarpophalangeal joints. They described their case as one of “advanced rheumatoid arthritis in a young woman”. Smyth (1949) described four cases of bone absorption and rheumatoid arthritis.

Cases observed by the Authors.—The authors have personally observed the following patients who are arranged according to the duration of their arthritis:

Case 1. B.O., a 22-year-old white male, whose disease was characterized by a sudden onset, rapid extension to involve all joints within a few weeks, and continuous progression. He became bedridden within one year with marked deformity. Photographs of both hands (Fig. 1) three years after onset, show marked deformities, with enlargement of both wrists, shortening of both thumbs, and distortion of all fingers. The fingers show flexion deformities and lateral deviation. The skin is loose, redundant, and somewhat wrinkled. Radiographs of both hands (Fig. 2) show marked destruction and absorption of many bones. The distal end of both ulna are tapered. The carpal bones have practically disappeared. Most of the ends of the bones comprising the metacarpo-phalangeal joints have lost all semblance of their normal rounded shape, with the metacarpals flattened as though cut off, and the phalanges cupped out or excavated. There is definite overlapping in many instances. Similar changes are seen in the proximal interphalangeal joints.

Case 2. E.C., a 29-year-old woman, whose arthritis began first in her hands. Her fingers were cold, clammy, and cyanotic, suggesting sclerodactylyia and Raynud’s disease, for which bilateral dorsal sympathectomies were performed. She subsequently developed pulmonary tuberculosis. Photographs of both hands (Fig. 3, overleaf) five years after onset, in the right hand show flexion deformities and ulnar deviation, and in the left hand marked shortening of the thumb, and enlargement of the terminal phalanges strongly suggesting Heberden’s nodes. Atrophy of the dorsal muscles of the hands and enlargement of the metacarpo-phalangeal joints may be noted. The skin is somewhat atrophic. Radiographs
Fig. 3.—Case 2. (E.C., female, 29.) Flexion deformities of many fingers. Ulnar deviation of fingers of right hand. Shortening of left thumb and enlargement of terminal joints suggesting Heberden's nodes.

Fig. 4.—Case 2. Incomplete destruction of all bones in thumbs. Absorption of the ends of many bones with cupping and subluxation.

of the hands (Fig. 4) show the distal ends of the forearms, wrists, and metacarpal bones to be approximately normal. The bones of both thumbs show destruction, with the left showing absorption of the distal half of the second phalanx and the proximal third of
the distal phalanx, and the right showing destruction of the joints. In the right hand the proximal phalanges show cupping and fusion of the proximal interphalangeal joints. There is also absorption of the bones comprising the distal joints of the fingers of the left hand with overriding.

Case 3. O.K., a 45-year-old white female, with moderately severe arthritis of 10 years' duration, who is still ambulatory and does most of her housework. Fingers and toes show increased mobility of all the joints and are quite painful. The knees, wrists and elbows are swollen and tender, and have limited, painful motion. Photographs of both hands (Fig. 5) taken 10 years after onset, show shortening of the thumbs and fingers, with wrinkled and redundant skin. Radiographs (Fig. 6, overleaf) show absorption with tapering of the distal ends of both ulni, partial absorption and apparent fusion of the carpal bones, and absorption, cupping, and subluxation of the bones of the metacarpophalangeal joints of the right hand. A definite but not very extensive destructive process is also seen in the proximal interphalangeal joints of the fingers and the distal joint of the thumbs. In the left hand the metacarpophalangeal joints are only slightly involved, except for the left thumb which shows marked destruction and absorption of the distal half of the proximal phalanx and the proximal third of the distal phalanx. The proximal interphalangeal joints of the index, middle, and ring fingers show absorption. The distal joints of the fingers of the left hand show the characteristic absorption and cupping of the distal end of the middle phalanges, and some loss of the proximal end of the distal phalanges. Radiographs of both feet, not shown, have marked absorption, cupping,

![Image](http://ard.bmj.com/AnnRheumDis:1stpublishedas10.1136/ard.9.3.213on1September1950.Downloadedfromhttp://ard.bmj.com/)
Case 3. Absorption and tapering of both ulni. Absorption and fusion of carpal bones. Absorption about metacarpo-phalangeal joints of right hand and proximal interphalangeal joints of left hand.

and overlapping of most of the metatarso-phalangeal joints, with complete disappearance of the distal half of the proximal phalanx of the left great toe, with absorption and cupping of the proximal end of the distal phalanx.

Case 4. L.E., a white male, seen at age 36, whose arthritis began at age 22. He now has complete bony ankylosing of his ankles, knees, and hips, and marked flexion deformities of his elbows and hands. He has had iritis with subsequent loss of one eye. There are changes in his skin and particularly in the nails which are suggestive of psoriasis. Radiographs of both hands (Fig. 7) show absorption and tapering to a point of the lower ends of both ulni, and extensive absorption of the carpal bones, resulting in almost complete disappearance which is more marked on the right. The bones of both thumbs show extensive absorption and obvious shortening. The 3rd, 4th, and 5th fingers of the left hand, and the 4th and 5th fingers of the right hand demonstrate extensive absorption with cupping and subluxation. Most other joints of the fingers show rheumatoid arthritic changes. Both metacarpo-phalangeal joints of the index fingers are free of the absorptive process.

Case 5. A.S., a white woman, 33 years old, whose arthritis began at 15 and who became bedridden at 18. The ankles, knees, hip, spine, wrists, and left elbow are firmly ankylosed. The shoulders and right elbow have marked limitation of motion. Both hands show distortion of wrists, shortening of thumbs, and flexion deformity of all except the left index finger. Abnormal range of motion of several fingers was present. Radiographs of both hands (Fig. 8) show severe demineralization of all bones. The left ulna
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Fig. 7.—Case 4. (L.E., male, 36.) Absorption and tapering of distal ends of ulni. Absorption and fusion of carpal bones. Absorption of bones of both thumbs and about metacarpo-phalangeal joint of left third, fourth, and fifth fingers.

Fig. 8.—Case 5. (A.S., female, 39.) Severe demineralization of all bones. Absorption and fusion of wrists and bones about metacarpo-phalangeal joints of fingers.
Fig. 9.—Case 6. (C.S., male, 53.) Marked shortening and ulnar deviation of both wrists and shortening of all fingers. Skin is loose and thrown into folds. Nails show psoriatic-like lesions.

Fig. 10.—Case 6. Severe demineralization of all bones. Extensive absorption of wrists and all fingers of hands. Marked subluxation of metacarpo-phalangeal joints.

shows absorption with tapering to a point. The details of the bones in both wrists are completely obscured as though the carpal bones and the proximal ends of the metacarpal bones were fused into a solid bony mass. An absorptive process is apparent in all metacarpo-phalangeal joints. The normally rounded distal ends of the metacarpal bones have completely disappeared whereas the proximal phalanges show the marked cupping and
overlapping. The proximal interphalangeal joints of both hands show bony ankylosis with similar involvement of the distal joints.

Case 6. C.S., a 53-year-old white male whose arthritis began at age 34. The disease progressed rapidly so that he was unable to walk within a few months of the onset. At present, with the exception of the joints of the hands, all the joints including the spine are ankylosed. He has lost the sight of both eyes due to cataracts. Photographs of both hands (Fig. 9) show marked ulnar deviation and shortening of the wrists with the skin of the fingers drawn up into folds. The fingers and thumbs are short because of changes in length of the phalanges. The nails and the adjoining skin show changes suggesting psoriasis. Radiographs of both hands (Fig. 10) show marked absorption of the distal ends of the bones in both forearms; the ulni taper to a point and appear to be approximately two inches shorter than the radii. The normal contours of the radii have been destroyed. The carpal bones have practically disappeared and those remaining are fused. Demineralization of the metacarpal bones and the phalanges is so marked that the details are obscured. The bones of the metacarpophalangeal joints have overlapped each other with the phalanges overriding about one third of the metacarpal bones. The middle phalanges have lost all semblance of normal contour, and appear almost egg-shaped in the right hand.

Case 7. J.L., a 59-year-old woman, whose arthritis has been present for 26 years, having begun in the hands and spread to nearly all of the joints. Radiographs (Fig. 11) show generalized demineralization, destructive absorption of the lower ends of the bones of the forearms, marked loss of substance and fusion of the carpal bones, and marked absorptive changes in the metacarpal and phalangeal bones. The most marked absorption is in the bones of the proximal interphalangeal joints with the proximal phalanges, particularly on the left, showing loss of practically all of their bony substance and tapering

Fig. 11.—Case 7. (J.L., female, 59.) Severe demineralization of all bones. Absorption of bones, wrists and hands.
to a point. A destructive process is present in the other bones. Radiographs of the feet, not shown, have similar changes with marked subluxation of the proximal phalanges on the metacarpal bones.

Case 8. C.D., a 67-year-old woman, whose arthritis began 42 years ago and who died shortly after admission to the hospital. Little is known about her clinical history. Photograph of both hands (Fig. 12) shows shortening of the wrists and fingers with marked redundancy of the skin. The fingers are markedly distorted with sharp angle deviations of many of the interphalangeal joints. The fingers showed abnormal range of passive motion in all directions and were useless to the patient. Radiograph (Fig. 13) shows severe demineralization of all bones, extensive absorption of the lower end of the left ulna, fusion and obvious loss of substance of the carpal bones, and extensive destruction and subluxation of all metacarpo-phalangeal and interphalangeal joints.

Discussion

The eight cases described here include five women and three men. The age of onset ranges from 15 to 35 with an average of 24.6 years. The exact age at which the severe absorptive changes began or their exact duration are not known, but they were observed as early as 3 years after onset in Case 1, and have persisted as long as 42 years in Case 8.

The onset of the disease of these patients was typical of rheumatoid arthritis with a course which tended to conform to the more malignant type, so that six patients were bedridden and practically helpless in a relatively short time.

Two patients, Cases 4 and 6, showed changes of the fingernails and skin suggestive of psoriasis. The nails were rough, thick, irregular, friable, and separated from the nail bed. The skin about the fingernails was red, rough, and covered with yellow crusts. Lesions of the scalp, trunk, or extensor surfaces of the extremities, which one would expect in typical psoriasis were not present.

The condition of the finger and toe joints in this condition varies considerably from the usual findings of rheumatoid arthritis. In the typical rheumatoid arthritic the joints have limitation of motion or ankylosis, and the skin over the joints is usually contracted, thin, atrophic, pale, and shiny, and appears to be firmly attached to the bone. In contrast, most of the finger joints of the patients with this type of arthritis had an abnormal range of motion in all directions, and there was another striking feature in the ability of the fingers to elongate like a telescope when pulled out; the skin was loose, wrinkled, and thickened.

The absorption of bone is not that observed in rheumatoid arthritis, for although most rheumatoid arthritics do demonstrate absorption to a varying degree, in these cases, this process has advanced to extreme destruction with a loss in some instances of as much as half a bone. Yet another unusual feature is the fact that the process is confined to only one or two anatomical regions, with the other joints showing the characteristic changes of rheumatoid arthritis. Thus the loss of localized bone substance, the absence of fibrous contracture of the joint capsule and muscle tendons, and the flabbiness of the skin produce a picture which may be considered as either an unusual variant or as an extreme manifestation of rheumatoid arthritis.
Fig. 12.—Case 8. (C.D., female, 67.) Shortening of wrists and thumbs, and lateral deviation of proximal interphalangeal joints which are freely movable in all directions. Skin is loose, wrinkled, and redundant.

Fig. 13.—Case 8. Marked demineralization of all bones. Absorption and fusion of radii, ulni and carpal bones. Architecture of most of finger joints has been destroyed.
Summary

(1) Eight additional cases of chronic absorptive arthritis, the so-called mains or doigts en lorgnette, are described.

(2) The clinical features of these patients include generalized long standing severe rheumatoid arthritis with the additional extraordinary findings of shortening of fingers or wrists with increased range and direction of motion, redundancy of the skin, and extensive absorption of the bones of the affected joints.

(3) The condition may be considered as an unusual variant or as an extreme manifestation of rheumatoid arthritis.

REFERENCES