

that obstruction and cirrhosis vary directly. Hence this condition of the spleen is a fresh proof of the extreme degree of cirrhosis attained by the large cirrhotic liver.

I think, therefore, examination of these cases goes far to show the truth of my contention that in alcoholic cirrhosis the liver is generally enlarged at all stages of the disease, and that whether enlarged or contracted the clinical symptoms and course of the disease are much the same, and the pathology of both forms identical; and, further, that there is no particular line of demarcation between the two, but that cirrhosis from alcoholic excess produces all shades of sizes from a liver of 100 ozs. to one weighing but 30.

Insistence on this fact of cirrhotic enlargement will prove of great value to the diagnostic power of the ordinary medical man. Hitherto he has sadly neglected close examination of the liver as an aid to diagnosis, knowing how impossible it is to perceive a small diminution in its size, while hæmatemesis or ascites has usually made the matter plain before extreme contraction takes place. But if it be dogmatically asserted, without qualification, that the cirrhotic liver is generally an enlarged one, then the whole attitude of the examiner will be altered. Attempted palpation of the liver will be the ordinary routine, and perception of the offending edge will bring a comfortable assurance of certainty of diagnosis instead of leading to confusion, as it must do now.²

A POINT IN THE DIAGNOSIS BETWEEN CHRONIC RHEUMATIC AFFECTIONS AND CHRONIC GOUT.¹

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THE chronic changes found in the various joints and due to rheumatic and gouty conditions, are at first sight so similar that much difficulty often arises in making a differential diagnosis. So-called chronic rheumatic affections may be divided into those due to true rheumatoid arthritis and those which have been left by acute rheumatic fever. Although these are probably entirely different affections, they will be treated for the purpose of this communication under the one head of chronic rheumatism, and an attempt will be made to show a fairly easy method of differentiating between the changes found in chronic rheumatism and those produced by true gout. The importance of a careful distinction between rheumatism and gout for purposes of treatment is sufficiently obvious.

The point which I wish to bring forward does not hold good in acute rheumatic or acute gouty conditions, nor can it necessarily be applied to other joints than those of the hands. It must be remembered then that I shall deal only with chronic changes in the hands.

In chronic rheumatism it will be found as a rule, to which there are very few exceptions, that the joints of the hands are symmetrically affected, that they are affected to an equal degree on the two sides, and that the deformities produced are similar and symmetrical. These statements hold good, however *bizarre* the deformities may be. Very rarely, although the joints affected are symmetrical, the deformities are asymmetrical, as in two cases I have seen. In one of these the deformities of the fingers of one hand showed flexion, extension, and flexion of the three joints of the fingers; whereas in the other hand they showed extension, flexion, extension. In the second case the middle finger of the left hand showed extension, flexion, extension; all the other fingers of the two hands being in a position of flexion, extension, and flexion. It should be mentioned that in examining deformities of the hands, care must be taken to exclude those produced by Dupuytren's contractions or by old injuries, which, as a rule, produce asymmetrical deformities.

When we examine the chronic changes in the hands produced by gout we shall find an entirely different state of affairs. If only a few joints are affected we shall see that they

are quite asymmetrical, the extent of the affection is unequal, and the deformities produced are dissimilar. If all



Fig. 1.—Symmetrical lesions and deformities. Chronic rheumatoid arthritis. Marked ulnar flexion of both hands



Fig. 2.—Chronic rheumatoid arthritis. Symmetrical lesions and deformities.

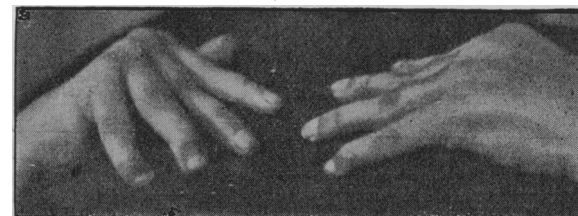


Fig. 3.—Chronic rheumatism. Symmetrical lesions and deformities. the joints of both hands are affected, as occasionally happens, then it will still be found that the amount of affection is very unequal, and the deformities are also quite different. This is a rule in gout, to which I have seen no exception. The photographs shown have been taken only from those cases of gout in which the diagnosis, as obtained from the history, the presence of uratic deposits, or of gouty kidney, was perfectly clear.

Incidentally it may be remarked that three of the slides show that ulnar flexion, or the "seal-fin" hand may occur in gout as well as in rheumatism. Many elaborate theories have been brought forward from time to time to explain the ulnar flexion of rheumatism, but some of them will certainly not hold when applied to gout. I think a simple theory will explain to a large extent this peculiar deformity, in both affections. The healthy but inactive hand held in front of the chest will be found to take up a position of slight flexion of the fingers, together with slight inclination to the ulnar side. Now if the hands are affected with a painful condition they will naturally be held in a position of rest, which is one

² Want of space prevents the publication of abstracts of the sixty-seven cases. These will appear in the *Birmingham Medical Review*, April, 1896.

¹ Read in the Section of Medicine at the Annual Meeting of the British Medical Association, held in London, July-August 1895.

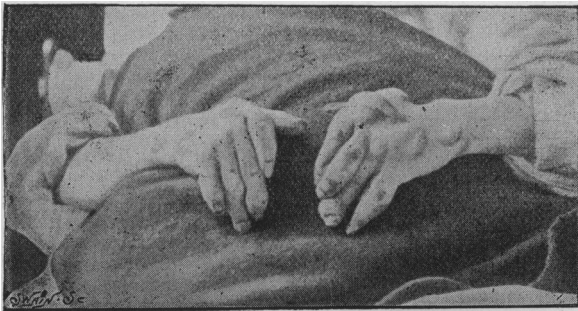


Fig. 4.—Chronic gout. Asymmetrical lesions and deformities.

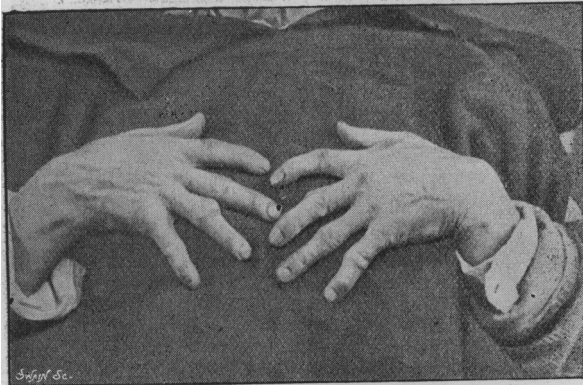


Fig. 5. Chronic gout. Asymmetrical lesions and deformities.

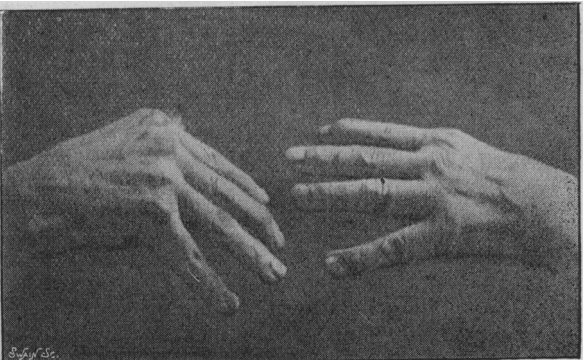


Fig. 6.—Chronic gout. Ulnar flexion of right hand. Asymmetrical lesions and deformities.

similar to what I have just described. As disease progresses, the joints become more or less fixed in this position by either bony or uratic deposit, and the position is by degrees magnified into a marked deformity.

ON THE RHYTHMIC CONTRACTILITY OF THE SPLEEN.¹

BY

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THE authors have investigated the rhythmic contractility of the spleen, which was discovered by Roy², and the influence of nerves, drugs, and animal extracts upon it. For this purpose the changes in its volume have been studied by aid of a specially constructed plethysmograph, so arranged as to afford the least possible obstruction to the blood vessels entering and leaving the hilum. Under these circum-

stances the spleen exhibits evidence of responding immediately by alterations in volume to every alteration in blood pressure, respiratory and cardiac, and *a fortiori* to such greater changes as are produced by compression of the aorta (contrary to Roy). This is even manifest when the organ is left connected with the rest of the vascular system, by one artery and vein only. The conclusion which Roy arrived at, that the spleen is practically cut off from the arterial system, and that its circulation is maintained by its own contractions, is thus shown to be incorrect.

The rhythmic contractions are independent of the central nervous system, for they will proceed after all the nerves passing to the organ are severed, and they can also be shown in an excised spleen perfused with defibrinated arterial blood.

They are excited to increased activity by intravenous injection of certain drugs and animal extracts which act specifically upon the organ. Prominent amongst these are curare, water extract of suprarenal, and water extract of brain. Suprarenal extract causes an enormous contraction, followed by increased extent of rhythmic waves; curare and brain extract, mainly the latter, without a preliminary contraction. Indifferent fluids, such as normal salt solution, produce in moderate quantity no such effects (contrary to Roy), and the same is the case with many animal extracts.

As was shown by Roy, a condition of dyspnoea causes marked contraction of the spleen. The authors show that this contraction is of central origin, for after severance of all nerves to the organ it is replaced by a passive dilatation, due to the rise of general blood pressure, this being soon followed by an increase in extent of the rhythmic contractions. Temporary cessation of the blood flow through the organ also has the effect of increasing their extent, probably because the splenic tissue is thereby deprived of oxygen and rendered temporarily more excitable.

The splanchnics, both right and left, contain not only nerve-fibres which produce contraction of the spleen (Tarchanoff, *Pflüger's Archiv*, vol. viii; Roy, *loc. cit.*), but also others which cause dilatation of the organ.

There is no evidence that the vagi contain any centrifugal fibres which influence the volume of the spleen (contrary to Roy). Provided their inhibitory action upon the heart is neutralised by atropine, even the strongest stimulation of the peripheral end of either cut vagus produces no direct effect upon the spleen.

Stimulation of any of the nerve twigs which accompany the arterial branches to the spleen causes strong contraction of the whole organ. The contractions which result from splanchnic stimulation are also obtained even when there is only a minute twig left, all other nerves being severed. There is, therefore, probably a very free nervous communication within the organ. We have obtained evidence of the existence of numerous afferent (sensory) fibres in the nerves supplying the spleen.

A CASE OF CHOLECYSTOTOMY: A REMARKABLE GALL STONE.

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A WOMAN, in her 70th year, had been under my treatment at intervals for several years, for a condition that had passed for the last 30 years under the name of "spasm of the stomach." During one of these periodical attacks the gall bladder became considerably distended, and could be plainly felt. She could not at that time be brought to consent to surgical treatment, and under the influence of palliative drugs the pain ceased, the gall bladder resumed its normal size, and the gall stone that was supposed to have caused the attack was presumed to have passed into the gut. Several subsequent attacks of a similar character, but without the bladder distension, served to confirm the diagnosis of stone. The patient steadfastly refusing to be operated on, the "olive oil treatment" was instituted, and resulted in the discharge of a large number of supposed gall stones with the fæces. These on analysis proved, however, to be composed of oxidised oleic acid, food debris, etc., with no trace of chole-

¹ Abstract of a Paper read before the Royal Society.

² *Jour. Physiol.*, vol. iii.