REMARKS ON THE SCAPHOID SCAPULA AND ITS SYNDROME:

THE CONNECTION WITH SYPHILIS IN THE ASCENDANTS

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REMARKS ON THE SCAPHOID SCAPULA AND ITS SYNDROME: THE CONNECTION WITH SYPHILIS IN THE ASCENDANTS.*

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It is with much pleasure that I have responded to the kind invitation of your local Committee to prepare an exhibit illustrating my studies of the scaphoid scapula and to demonstrate a few cases showing this anomaly. In the exhibit I have endeavored to illustrate the scaphoid scapula in its anatomical, hereditary and clinical bearings. In connection with the demonstration I would especially call attention to an abstract of a study by Dr. A. Myerson wherein the tenth child of a family showing scaphoid scapulae with other gross anomalies succumbed to diffuse manifestations of congenital syphilis. Before demonstrating the cases, permit me to give a brief résumé of some of my observations and to point out certain methods of study which are essential in determining the clinical significance of the scaphoid scapula.

My studies of 350 skeletal scapulae have shown that approximately 41 per cent. of this number is of the scaphoid type and that this type differs from the average type of scapula of the human race in six anatomical particulars, chief among which is that the vertebral border below the scapular spine is more or less concave. I have, therefore, called this type of scapula scaphoid. My studies of a number of embryos in all stages of development have shown among other things that the typical scaphoid scapula is found as early as the eighth week in embryo life.

My statistical studies have shown: (1) it occurs in all branches of society; (2) it is present in a relatively large per cent. of our population; (3) it occurs with great frequency among the young, but is relatively infrequent among the old; (4) it occurs with great frequency among backward individuals, epileptics, neurotics, the insane and the so-called incorrigible and criminal classes; (5) when it is found to a rather marked degree it is almost invariably associated with other anomalies in development which may be anatomical, physiological, psychic, psycho-

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neurotic or a combination of these; (6) the natural habitat of the scaphoid scapula is in the deviate.

My clinical studies have shown that many individuals in whom the scaphoid scapula is found are undersized, have sluggish attitudes, defective musculature and a lowered general resistance, and that such individuals often show definite physical signs and conditions which I have called the scaphoid scapula syndrome. This syndrome consists in: (1) the deviating characteristics of the whole individual; (2) a degree of vascular changes out of all proportion to the years of the individual; (3) an abnormal degree of lymph-gland palpability; (4) adenoids during the early periods of life; (5) simple enlargement of the thyroid gland; (6) nocturnal incontinence, especially during childhood; (7) either the presence or history of catarrhal affections beginning in early infancy and often persisting for years.

My comparative clinical studies have shown that the scaphoid scapula occurs in all the progeny of some parents who have average scapula; that, as a rule, it occurs in all the progeny of parents where one or both have scaphoid scapulae and that it is transmitted from parent to child, and so on through several generations (see Appendix). From my anatomical, clinical and comparative clinical studies I have arrived at the general conclusions: (a) that no assumed circumstance in the life of the individual after his birth could give him the scaphoid scapula; (b) that its occurrence can only be accounted for by the assumption of some disturbing factor, some abnormal circumstance in the parents or in the more remote ascendants.

My comparative clinical studies have further shown that syphilis in the ascendants is one cause of the scaphoid scapula and its syndrome. I have shown this connection in several ways, but the most conclusive proof of it has been found in my studies of the progeny of known-to-be syphilitic parents and of the progeny of parents who are, undoubtedly, free from syphilis. By comparative clinical studies I mean that each member of a generation has been studied clinically; that the parents have been studied in a similar manner and, when possible, both parents and progeny have been subjected to every known laboratory test which might furnish additional data and, finally, each member of a generation has been compared one with the other and each in turn with his parents and, when possible, with his more remote ascendants. These studies have demonstrated the truth of what is universally expected of the progeny of healthy parents; namely, that healthy
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parents, as a rule, beget a healthy progeny and a progeny which compares favorably with the parents in physical and mental endowments.

I have been able to show in these studies that when syphilis exists in (a) parents having average scapulae, (b) parents one of whom has scaphoid scapulae, (c) parents both of whom have scaphoid scapulae, the progeny rarely compare favorably with the parents; that, as a rule, the younger members of a generation show less deviation, and the scaphoid scapula and its syndrome in a less degree than do the older; that the scaphoid scapula and its syndrome are present, as a rule, in some degree in individuals who show the heretofore recognized signs of congenital syphilis, and that the scaphoid scapula and some of its correlations are rarely absent in the progeny of syphilitic parents, even in such progeny as we have heretofore considered free from every sign of hereditary taint.

A seemingly convincing proof of the rôle played by syphilis in the causation of the scaphoid scapula and its syndrome is found in families of which I have thus far found ten examples like the following:

Both parents having average scapulae; the father after begetting several children, each having average scapulae and comparing favorably with himself and the mother, contracts syphilis. The children begotten after the infection show deviations, including the scaphoid scapula and its syndrome in varying degrees and compare unfavorably with the children begotten before the infection and compare unfavorably with the parents.

From my clinical and comparative clinical studies I have been forced to conclude that syphilis in the parents or more remote ascendants is one cause of the scaphoid scapula, but we must not conclude that syphilis is the only factor in the causation of the scaphoid scapula. There may be, nay, more! I believe there must be other factors, although diligent search extending over almost six years has failed to disclose any other definite cause. For the reason that the scaphoid scapula may be hereditary and for the further reason that there may be other causes for it than syphilis, we are not justified in assuming that any individual in whom we find the scaphoid scapula is a congenital or heredo-syphilitic. Before we may definitely determine either the origin or the clinical significance of the scaphoid scapula and its syndrome in any individual, we must study him from every angle and in a comparative clinical way with his own generation, with
his parents and, when possible, with his more remote ascendants.

With the use of modern refinements in clinical investigation, with
the use of laboratory methods to confirm and control clinical de-
ductions, with patient study of individuals and of individuals of
families, rather than the histories of individuals of families, the
clinical significance of the scaphoid scapula and its syndrome may
be readily determined. Clinical consideration of the scaphoid
scapula and its syndrome by many workers will, undoubtedly,
broaden our conceptions concerning the pernicious effects of syph-
ilis in individuals who have acquired it, in their children and in
their children's children.

APPENDIX.

TENTATIVE CONCLUSIONS, BASED UPON STUDIES OF MANY INDIVIDUALS AND FAMILIES,
FORMULATED AS A THESIS AND FIVE HYPOTHESES ELUCIDATING THE ORIGIN AND
TRANSMISSION OF THE SCAPHOID SCAPULA UNDER NORMAL AND ABNORMAL
CIRCUMSTANCES.—ABNORMAL CIRCUMSTANCE EQUALS SYphilis IN THE
PARENTS.

THESIS. The scaphoid scapula is an anomaly in development originating in
the progeny from some abnormal circumstance operating in the parents; is there-
after transmitted from parent to child and so on through several generations;
and, unless the abnormal circumstance again becomes operative in the descendants,
the scaphoid scapula finally disappears and the racial type again becomes dominant.

HYPOTHESIS 1. Since scapula having more or less convex vertebral borders
have been shown to represent the racial type of scapula, we should expect under
normal circumstances that the children of parents having this type of scapula
should have a similar type.

HYPOTHESIS 2. From one or both parents having scaphoid scapula we should
expect, under normal circumstances, in their progeny: (a) if only one has it, the
children to show it less marked than the parent having it; (b) if both par-
ents have the scaphoid scapula, we should expect their children to have it more
marked than either parent, or at least to be as well marked as the parent showing
it to the least degree.

HYPOTHESIS 3. Both parent having average scapula, we should expect, under
abnormal circumstances, their children to show scapula of the scaphoid type, the
degree in each child from the oldest to the youngest depending upon either the
remoteness from or the activity of the abnormal circumstance producing it, and
as a rule the youngest child should show the scaphoid scapula to a less marked
degree than the eldest.

HYPOTHESIS 4. Where only one parent has the scaphoid scapula we should
expect, under abnormal circumstances, all of the children to show it to a greater
degree than the parent having it and, all things being equal, the youngest child
should show it to a less marked degree than the eldest.

HYPOTHESIS 5. Where both parents have scaphoid scapula, we should expect,
under abnormal circumstances, all of their children to show the same type, but to a
greater degree than either parent, although depending upon the remoteness from
or the activity of the abnormal circumstance, the youngest child may show it less
than the oldest, but equal to that parent having it the least.

1 The Scaphoid Scapula, a Frequent Anomaly in Development of Hereditary,