Medical Matters.

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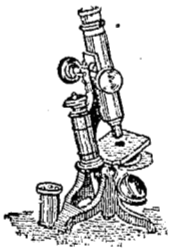
THE CAUSATION OF CONTRACTED PELVIS.



Dr. Bacon, of Chicago, published an excellent article ("The Clinical Review," April, 1902) on the importance of rickets in girls from an obstetrical standpoint. It is just one of those matters which is usually overlooked until someone points it out, and then it is seen to be obvious. Granted as it must be that prevention is better than cure, it is surely better to ascertain the causes of difficult and dangerous labours and prevent them, than permit them to develop unchecked.

There are several kinds of pelvic deformity due to rickets. The most common is the simple flat pelvis. Not very rarely we see the pseudo-osteomalacia form. The most characteristic deformity is the simple flat pelvis to which the author directs attention. Different explanations have been given of the way in which this deformity is produced. It will be recalled that the essence of the pathologic process in rickets is such a disturbance in the normal bone formation as leads to a deficiency in the deposit of bone salts, while the usual, or perhaps an increased, absorption of salt occurs. There is at the same time an increase in the cartilaginous and osteoid formation that leads to irregular growth of the bone extremities in the regions of tissue change.

According to Litzmann the pelvic deformity is caused by the weight of the head and trunk when the child is in the sitting or standing position. The soft, yielding sacrum is pressed down and forward between the articulating surfaces of the ilium. The bone has a rotating transverse axis passing through the second sacral vertebra. About this it rotates, throwing backward and upward the lower part of the bone. Thus is produced an excessive inclination of the pelvis. The end of the sacrum is often held down by ligaments, thus making the sharp angular bend near the lower end.

Freund has modified this explanation by pointing out that the bodies of the vertebræ are probably crowded forward more than the wings of the sacrum, which retain their articulation with the articular surfaces of the ilia unchanged.

To this explanation must be added the influence of the strong ligaments which bind the spinous processes of the bodies of the vertebræ to the margins of the ilia. As the vertebræ are crowded forward the traction on the ligaments draws the margins and the posterior spines of the ilia nearer together. This tends to separate the anterior margins which, however, are fastened together at the symphysis pubis. The result of the traction, therefore, is to increase the transverse diameter.

To this common explanation of the rachitic flat pelvis objections have been raised, without, however, seriously impeaching its validity. One cause of the doubt concerning the theory has been the study of the cases of so-called fœtal rickets, which are said to show a deformity quite similar to that of adult rickets, when of course there can be no influence of the trunk weight. Most of the cases of so-called fœtal rickets are, however, no doubt of different nature than true rickets, and whatever explanation is applicable to them cannot be applied to the cases under consideration.

Although it is no doubt true that other factors are involved in the production of the pelvic deformities of rickets than those given above, we can safely say that the pressure from the trunk load is of chief importance.

Theoretically, two things are important in the treatment of rickets in its acute stage. One is control of the disease process as soon as possible, and the other is the care of the child to prevent the pelvic deformity. The disease process is fortunately generally corrected without any very great difficulty by proper dietetic and hygienic management. If there be a gastro-intestinal infection, which is not infrequently the case, its correction is of course the first thing to be attended to. Not infrequently we find that the child is on a starvation diet of diluted milk. There seems to be a widespread fear among physicians all over the country that fat will injure a baby's digestion. I have known many instances where a baby was starving on a diet of one part of milk to three parts of water, when the physician concluded that the child was getting too much fat, and ordered skimmed milk diluted instead of the ordinary whole milk. I have sometimes found nursing children rachitic, and in all of these cases there was an abnormally

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