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### DEFLECTION OF THE NASAL SEPTUM AND ITS SURGICAL TREATMENT.

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Deflections of the septum, either as a result of traumatism or inflammatory action, are probably the most frequent of the exciting causes of catarrhal inflammation in the nasal mucous membrane. Consequently it becomes a matter of considerable importance that we should thoroughly appreciate, not only their method of development, but also the nature of their action, upon the lining membrane of the nasal cavities, as well as their influence upon its respiratory functions. In health, we find the nasal septum presenting simply as a bony and cartilaginous wall, dividing the nasal passages into two symmetrical cavities. In diseased conditions, we find present in this structure certain abnormalities of contour, which undoubtedly have a marked influence in the production of an ordinary catarrhal inflammation. The earliest investigators attributed deflections to excessive growth of the septum, as a result of which it became too large to fit in its bony framework, thereby becoming warped. This theory may account for a certain amount of cases, but the great proportion of cases requiring surgical interference, that have come under my care, have had a clear traumatic history. Sir Morell Mackenzie in an examination of 2152 skulls, with the bony septum entire, in the museum of the Royal College of Surgeons, found 76 per cent. presenting more or less deviation. 38 per cent. to the left side, 28 per cent. to the right, while in the remainder it was irregular. When it is remembered that a large proportion of cases as seen in practice, present the deflection chiefly confined to

the triangular cartilage, we see that the percentage must be even larger than that given by Mackenzie. Delavan has found among European races well marked deflection in 50 per cent. of several thousand crania examined. In cases of deflection the cartilaginous, or bony septum, or both portions, are simply bent to one side, the cartilaginous portion usually being the most involved. The deformity causes enlargement of one nasal chamber, at the expense of the other. In most instances of deflection of the septum there is also thickening, especially at the lower part of the convex surface. The deflections are sometimes double, the convexity of one bend presenting in front on the one side, and the convexity of the other bend presenting further back on the opposite side, thus forming a double deviation resembling in shape the letter S.

In cases of fracture I have found that the cartilage is the part of the septum most frequently broken. Next in order comes the perpendicular plate of the ethmoid, its articulation with the vomer being the usual seat of fracture. The vomer is very rarely influenced by the concussion, its anterior edge being posterior to the bones of the face, and the cartilage yielding to the force of the blow. The causes of this deformity are obscure, and various theories have been advanced to account for its occurrence. In regard to those deflections which are due to fracture of the septum, of course there can be no question, they are due to a direct blow upon the nose. When we undertake, however, to inquire into the causes of the S shaped or unilateral deviations from the middle line, a wide field for discussion is placed before us. Morgagni was the first to advance the view that these deflections are due to excessive development of the vomer. This theory was subsequently advocated by other investigators, and I think it would account for a great proportion of these cases. With every regard for the various theories, I think clinical observation teaches us that traumatism is by far the most frequent direct cause of septal deformities. Where the patient is conscious of obstruction in one side of the nose, the trouble is not infrequently dated from a severe blow or fall on the face. This, coupled with the fact that men are three or four times as frequently affected as women, and that boys are more liable to blows on the nose than girls, indicates very strongly the probability of a