

A LECTURE ON THE CAUSES AND TREATMENT OF HARE-  
LIP DELIVERED IN THE POST-GRADUATE COURSE,  
JUNE, 1898.

BY

FRANCIS J. SHEPHERD, M.D., C.M.,  
Professor of Anatomy, McGill University; Surgeon to the Montreal General  
Hospital.

GENTLEMEN:—Before describing the treatment of the deformity which I am to speak of to-night, I should like to give you a short account of the development of the face, for all the congenital deformities met with are due to an arrest of this development at an early period of foetal life. A study of embryology is of great assistance to the surgeon in enabling him to account for many of the congenital conditions he not infrequently meets with.



*Pr. Glob.*—Globular extremity of the mesial nasal process.  
*Mx.*—Maxillary arch.  
*Mn.*—Mandibular arch.  
*Hy.*—Hyoid arch.  
*Br.*—First branchial arch.

*Development.*—At a very early period of foetal life a series of clefts (branchial) appear on the side of the cephalic extremity, separated by rods of tissue called *branchial* or *gill arches*. The clefts communicate with the alimentary canal. The first branchial cleft is between the mandibular and hyoid arches. The mandibular arch which is afterwards developed largely into bone is divided into the superior and inferior maxillary portions. The two sides of the inferior maxillary portion early unite to form the lower jaw, but interposed between the two superior maxillary portions is the fronto-nasal pro-