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History of Rhinology: Functional surgery of the nose in France at the turn of the century

J. Willemot, Ghent, Belgium

SUMMARY

The first reference to an attempt at functional surgery of the nose which we have discovered in France concerns Blandin (Paris 1798–1849) who "corrected" septal deviations with a punch; one arm is introduced into each nostril.

Heylen performed a submucous resection in 1847, Chassaignac in 1851 and Demarquay in 1859 through the external median columellar route.

In 1876 Richet carried out a resection of the deviated septum after having elevated the whole cartilaginous pyramid, achieved by a horizontal incision of the base of the columella. Paul Berger recommended, in 1883, a subperichondrial chisel resection of the salient part of the septum.

In 1888, Miot approached septal thickening with galvano-caustic chemicals using metal plates or through a method called galvano-puncture. In 1892 Escat resected the cartilaginous arch and its corresponding mucosa after having separated the contralateral mucosa with injected water.

In 1903, Caboche referred to both operations used at that time to correct cartilaginous septal deviations, e.g. Petersen's operations (submucous resection) and Asch's operation (fracture with repositioning).

In 1905, Blanc distinguished between three types of operations:

1. *Procedures based upon the fracturing the septum or its straightening and its maintenance with a splint.*
2. *Procedures designed in order to overcome the elasticity of the cartilage by making incisions followed by its retention in place.*
3. *Submucous resection of the cartilage based upon the principle that the septum is too big for its surroundings.*

In 1917, Dangouloff and Woyatchek developed a septoplasty technique, many modern operations being only pale copies of theirs. It consisted of four possibilities: mobilization, straightening, circular resection and partial resection.

The first reference to an attempt at functional surgery of the nose which we have discovered in France concerns Blandin. Philippe-Frédéric Blandin (Paris 1798–1849) "corrected" septal deviations with a punch; one arm is introduced into each nostril.
In 1876, in his monography on septal lesions, Denis De Casabianca quoted:

1. Heylen who performed a submucous resection in 1847, with straightening of the remaining part;
2. Charles Marie Edouard Chassaignac (Paris 1805–1879) who published in 1851 an example of septoplasty correction, a case with functional and aesthetic problems;
3. Jean Nicholas Demarquay (1811–1875) who performed, in 1859, submucous resection of the septum through the external median columellar route (between the exposed medial crura).

In about the same period (1876), Dominique Alfred Richet (Paris 1816–1891) (quoted by E. Miot) carried out a (submucous?) resection of the deviated septum after having elevated the whole cartilaginous pyramid, achieved by a horizontal incision of the base of the columella.
Paul Berger (Paris 1845–1904) recommended, in 1883, a subperichondrial chisel resection of the salient part of the septum. This was the time when Ingals detailed the first submucous resection of the septum in 1882 and of Roe, who is considered to be the pioneer of corrective rhinoplasty with his work in 1887.
In 1888, Camille Miot (Paris 1838–1904) approached septal thickening with galvano-caustic chemicals using metal plates (Figure 1A) or through a method called galvano-puncture (Figure 1B).

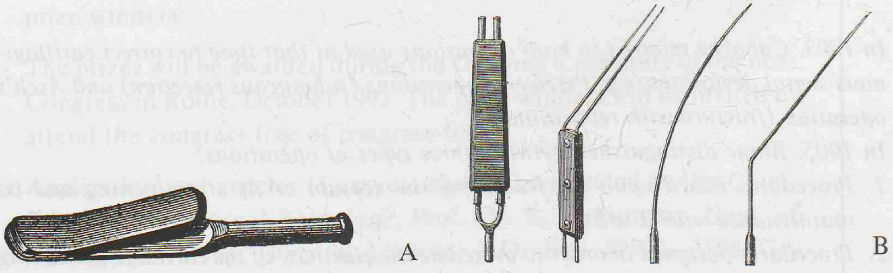

Figure 1. Miot approached septal thickening with galvanocaustic chemicals using metal plates (A), or through galvano-puncture (B). (From Miot, 1888)

In 1892, Ettienne Jean Marie Escat (Toulouse 1865–1948) resected the cartilaginous arch and its corresponding mucosa after having separated the contralateral mucosa with injected water. In 1906, he voiced the opinion that Killian's operation was impossible to perform and, in any case, took too much time...

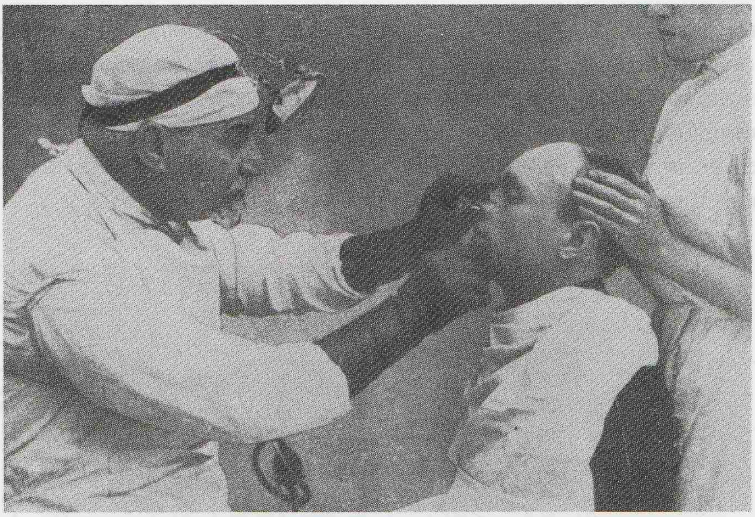

Figure 2. Jean-Gabriel-Emile Moure (Bordeaux 1855–1914).

In 1900, Jean Gabriel Emile Moure (Bordeaux 1855–1914) (Figure 2) expressed the opinion that Asch's technique (fracture with repositioning using the septotome) was the best one as far as the septum is concerned; however, dilatating tubes have to be placed post-operatively, a procedure which is not painless. He proposed placing the tubes from the beginning and working through those tubes.

We have now reached the time of Killian and Freer.
In 1902, M. Galand, from Paris, reviewed the various external incisions important for a nasal approach and praised the sublabial rhinotomy or Rouge's operation. The indications referred to are a pronounced septal deviation and septorhinoplasty. Henri Gaudier (Lille 1867–?) approved this choice in 1905. Vignard, however, in 1903 adopted the endonasal approach, as did Léon Berard (Lyon 1870–1956) in 1905, Julien Bourguet (1876–1952) in 1913, Maurice Lannois (1856–1942) and Antoine Sargnon (1872 - ?) in 1916.
In 1903, Henri Caboche referred to both operations used at that time to correct cartilaginous septal deviations, e.g. Petersen's operations (submucous resection) and Asch's operation (fracture with repositioning). However, he recognized that the latter which was most often performed, strikes against the spina nasalis and the vomer attachment: "This is why we had the idea of complementing Asch's incisions with dislocation of the spina nasalis and the vomer. The flaps that have been separated from their inferior osseous attachments are then very easily mobilized".

However, Lubet-Barbon (Paris 1857-?) still described, in 1904, a cartilaginous resection of a deviation of the septum performed with the scalpel and a resection of the osseous septum in the plane of Carnalt-Jones, an operation which is carried out through the mucosa.
Claude Martin (Lyon 1843-1911), in the same period designed a clamp used to straighten the septum; the instrument bears his name (Figure 3).

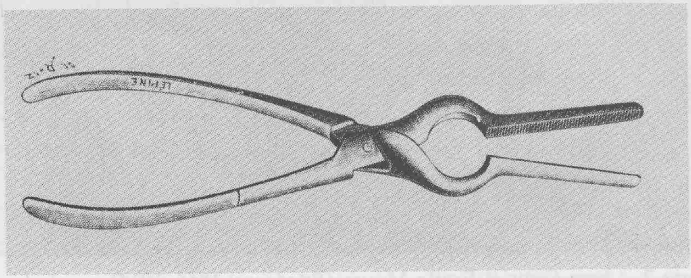

Figure 3. Clamp used by Claude Martin (1904) to straight the septum.

In 1905, F. Blanc from Lyon distinguished between three types of operations:
1. Procedures based upon the fracturing the septum or its straightening and its maintenance with a splint.
2. Procedures designed in order to overcome the elasticity of the cartilage by making incisions followed by its retention in place.
3. Submucous resection of the cartilage based upon the principle that the septum is too big for its surroundings.

Jean-Paul Mouret (Montpellier 1865-1928) and J. Toubert from Paris, expressed the opinion, in 1906, that submucous resection of the septum can be performed in all cases except those with deviations of the dorsal edge, for which the authors could not specify an ideal operation.
In 1917, Dangouloff (Leningrad) and Vladimir Woyatchek (Leningrad 1876) (authors, who are included in this review as knowledge of their technique were disseminated in the "Revue de Laryngologie"), developed a septoplasty technique, many modern operations being only pale copies of theirs. It consisted of four possibilities: mobilization, straightening, circular resection and partial resection. They noted that this operation had the following advantages:
1. Maintenance of the septal resistance.
2. After complete healing, the septum does not float around and is not pulled towards the lateral wall during respiration.
3. There are fewer accidental perforations.
4. There are fewer cases of mucous atrophy.

5. There are fewer snub-noses (so-called duck-noses) resulting from septum contraction with scarring.
6. In the event of a later cosmetic operation on the nasal skeleton, the compactness of the septum will strenghten the nose to be repaired (Figure 4).

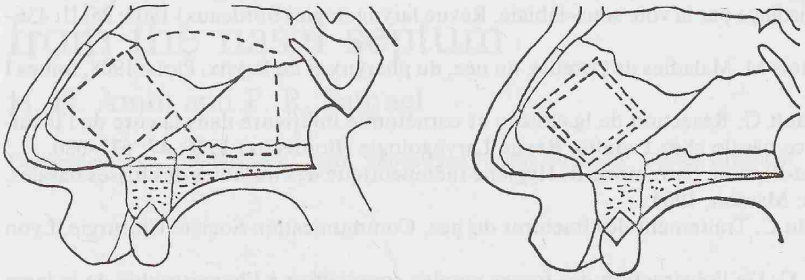

Figure 4. Two possibilities of the septoplasty of Dangouloff (1917): fracture and correction (left); partial resection (right).

These conclusions constitute a good survey of the problems concerning corrective septal surgery. The authors can be criticized only for not having taken into account the spina nasalis and the premaxilla which had previously been studied by others.

In 1920, Léon Dufourmentel (Paris 1884–1957) underlined the coexistence of nasal skeletal deviations and malformations of the upper maxilla and of the dental alveoli.

In 1926, Georges Liebault expressed the opinion that an inferior conchotomy (we would now say tubinectomy) is more preferable than a submucous septum resection. This modified operation is still performed.

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Dr. J. Willemot
G. Willemotlaan 90
B-9030 Ghent-Mariakerke
Belgium