Rhinology: 1900 to 1910

A Brief Survey and a Bibliography

MAURICE H. COTTLE, M.D., Chicago

...the space of one man's life is insufficient for him to know anything but the rudiments of our art in many branches, and be, at the same time, in a position to advance in any degree the boundaries of its smallest province... we may pause (therefore) I trust (for) a just consideration and appreciation of the labor of our predecessors. Our knowledge has been built up... not by the mushroom activity of any one period, or of any one school of medicine, or by the premature birth of an idea or theory, but by the painstaking, laborious exertions of many generations of earnest men, working, for the most part, without expectation or perhaps desire; certainly without the attainment of those rewards, by which not only the layman, but alas, even the average member of our own art, measures what he calls success.

These words, written in 1902 by Jonathan Wright, concluded a lengthy survey of the story of our art covering a period of 5000 years.

The poetry editor John Ciardi,* in a recent essay emphasized that no great progress is made without a sense of the past as well as of the present. He says, "No painter can produce a good canvas without a broad knowledge of what has been painted before him. No architect can plan a meaningful building except as he has pondered the architecture of the past, and no writer can produce good writing without a sure sense of what has been accomplished in the past within his form."

From the history of rhinology, I have selected the first decade of the 20th century for reviewing because it seems to me to be a "golden period," during which the accomplishments of the past blossomed into their fullest glory and new seeds were developed and sown for flowering in the future. The rhinologic topics receiving much attention during this decade were septum surgery, rhinoplasty, anatomy, and physiology.

In the preceding years, operations on the septum were gross, destructive, crushing procedures involving mass movement and mutilation of bone, cartilage, and mucosa alike, which depended upon nature's healing properties for their justification and toleration. The crushing operation of Asch, the V-shaped incisions and excisions of Kyle, and the flap operations of Gleason were among the better known and most frequently used. However, Inglis in 1882, Krieg in 1889, and Boeninghaus in 1899 were already emphasizing the need of careful submucosal manipulation of the hard parts of the septum. Their work, together with the works of others, made possible the beautiful and significant presentations by Freer. The English version of Killian's classic article, "The Submucous Window Resection of the Nasal Septum," by E. Edwin Foster of New Bedford, Mass., was published in the Annals of Otolaryngology and Laryngology, 1905. Here are some of Killian's conclusions: "The essential feature of the technique is that I make by means of my long speculum a medial space in which I can as easily operate as in the inside of either nasal cavity... the experienced operator can rapidly remove large pieces. I can perform the whole operation in 20 minutes..." and his last conclusion is, "I have never had more enjoyment from any other small operation than

from the described septum operation, and
can most enthusiastically recommend it."

In the same issue of this journal, William
Lincoln Ballenger first described the use of
his swivel knife, in which, he wrote "enables
me to perform the operation in from 5 to
20 minutes . . . with the swivel knife the
cartilage can be removed in 5 to 30 seconds."

He described the use of a great many instru-
ments, saying that "more instruments means
more lacerations." His final justification for
his presentation can be summed up in the
following quotation: "After a reasonable
experience it seems probable that the great
majority of operations need not require
operations than 10 minutes. Killian claims
an average of 20 minutes, while Freer by
his methods claims an average of 45 min-
utes." This stress upon the time factor is
quite revealing.

Important contributions were made by
Hajek, Menzel, Leon F. White, Weil, Zendeck,
Müller, Spratt, Beck, McCaw, Carter, MacCoy,
Richardson, Sluder, and most of these were carefully studied by
Freer in the course of this decade. He
quoted from many in his articles, and appar-
ently gave them serious consideration in
estimating his own contributions. His con-
clusions from the article in 1905 should, in
part at least, be restated and reevaluated.
1. The appearance of the deformities does not
divide them into two great groups with distinct
aspects, one obviously traumatic, and the other
due to faulty growth as is taught by Killian . . .
this is merely confusing . . .
2. The window resection is adapted to children,
but the chance of a possible recurrence from the
effects of growth demands complete removal of the
vestiges of defects.
3. The firmness . . . of the septum is completely
reproduced in the window after the resection
(111)." 
4. Cases seen two and a half years after the
operation show permanency of the result. (Note: 28
years in the time for evaluating permanency.)
5. Though the author (Freer) has never seen
a case of sialing in of the naso bridge after the
naso resection, Müller's and Menzel's warning
should be heeded, to retain a strip of the cartilage
of the septum under the lateral cartilages of the
external nose. (Note: Also advised by Hajek.)

A. M. A. ARCHIVES OF OTOLARYNGOLOGY

6. Lower portion of the quadrangular cartilage . . .
may be resected without fear . . . (Note: Surely
not so.)
7. The recurrent position of the patient is
best for the operation, except in operating on the
nasal floor.
8. The Kirstein light is the most suitable one.
10. 11, 12, and 13. Instruments.
11. Even if strictly unipolar, the eleva-
tion of the mucous is not to encounter adherent
places that need separation by keen dissection.
(This cannot be overstressed.)
12. The cutting out of denuded cartilage in one
piece is the easiest part of my operation. (Note:
When it is that easy, removal often can be
avoided.)
13. Neither cartilage nor bone should ever
be broken, twisted, or torn from its attachment,
but should always be cleanly cut away.
15. There is a tendency to hasty and incomplete
removal of the bony part of the deflection.
16. Sewing is needless.
17. Packing.
18. Considering the many difficult bony resec-
tions met with, the author (Freer) does not think
that the operation can be done in 20 minutes, the
estimated time of Killian. (Note: Much more
difficult by far is the freeing of the multifractured
and distorted cartilaginous deformities, especially
those mixed with bony deformities and scars in
the anterior inferior part of the nasal septum.)
Freer was nurtured in the scientific atmos-
phere of Chicago which revolved primarily
around Ingals. Freer's talented and indus-
tious work affected all his colleagues. His
accomplishments led to the younger men
about him, but none were so effectively
influenced as was Samuel Salinger, until
recently also of Chicago, who I think be-
came the direct successor of Freer and
Ingals and brought to our times the finest
operation of C. W. Richardson of Washington that
have been improved upon.

Goodale and others in the Boston area,
with the influence of the already familiar
work of Roe and Weir, probably created the
groundwork for the development of interest
in rhinology which were presented to the
profession in the great works of Mosher.
His (Mosher's) outstanding contributions
at this period entitled "The Premaxillary
Wings and Divisions of the Septum," pre-
seated at the 13th Annual Meeting of the
American Laryngological, Rhinological, and
Otological Society in 1907, stressed the need
for sharp separation of the soft tissues
lying between the two structures before safe
and adequate separation of the nasal mucous
membrane on both sides could be accom-
plished.

It was pointed out by John N. McKenzie
in the New York Medical Journal, 1905,
that the craze for nasal operations had
caused the pendulum to swing too far from
rational boundaries: that the amount of
reckless surgery in the nasal passages would
never be known.

In the Laryngoscope of 1906 in a splen-
did critical and long review, John R. Wino-
low of Baltimore concluded that there is no
single method suitable for every variety of
defor mity but all methods give good results
in certain cases. It seemed to him that
indications for the selection of each particu-
ar operation had not been sufficiently de-
fin ed. He justly pointed out that the lack of
detail in recorded cases would seem to indi-
cate insufficient study; further, that the older
methods had not met the requirements and
had not proved entirely satisfactory. He
made many significant observations, viz.
"Inspection under cocaine anesthesia is es-
ential to diagnosis, but inspection alone
often yields erroneous impressions. The
graduated probe is often the requisite to
determine the extent of the deformity, the
depth and the depth of concavity. The object of operation is the
restoration of absolute symmetry." He
concluded that conservation and judgment
in selection of cases is indispensable. He
quoted Semon, "The magnitude of opera-
tions must not exceed the importance of the
symptoms." He referred to the suggestion
of C. W. Richardson of Washington that
leaving splints in the nose for a period of
7 to 10 days after the operation simplified
the after treatment. He quoted Roe, Bos-
worth, Hajek, Killian, Menzel, Janson,
Freer, and Ballenger. He believed that the
septum is not a mere partition but a support
of the external nose. He described the
operations of Harrison Allen in which the
maxillary crest is severed by means of a
small chisel placed beneath the upper lip,
and the more extensive but safe and similar operation
by Lowe. He concluded that a knowledge
of all methods is needed and that the older
methods should be modernized, rather than abandoned, and that
submaxillary operations of the nasal septum belong to the
most difficult of operations, that they are
indispensable and should be mastered
by everyone who aspires to the title of the
modern nasal surgeon.

In his presidential address to the Ameri-
can Laryngological, Rhinological, and Ot-
ological Society, 1904, Frederick Cobb of
Boston said, "How numerous have been the
operations devised upon the nasal septum,
but how many of their originators will say in
a medical meeting today that their
methods have been improved upon.

need for sharp separation of the soft tissues
lying between the two structures before safe
and adequate separation of the nasal mucous
membrane on both sides could be accom-
plished.

RHINOLOGY 1900-1910

Cottle

Vol. 67, March, 1928
to this work, which he had so brilliantly in-

augurated. And, I might add, as far as I

know, further work by others along the lines

of his original investigations was not done

for several decades.

Chevalier Jackson in 1902 presented a dis-

cussion of why corrective operations of devi-

ations of the nasal septum often failed. His

article is splendidly written and well il-

lustrated. He observed the relationships of

sleep and rest to the position of the head

and to the turgescence of the inferior turbi-

nates, but was, in my opinion, incorrect in

his conclusions that the swelling of the in-

ferior turbinate, especially during sleep,

pushed the septum and caused deviations.

His conclusion on the inadequacy of the

septum operation was that the surgeon had

failed to remove a portion or all of the

inferior turbinate on the concave side of

the nose. He finished his article with this

exhortation: "Let the skeptic not theorize—
go cut out the turbinates." Yet Goodale in

1895 had emphasized the variations of the

route of inspired air due to the shape and

size of the vestibule, the inferior and middle

turbinate, and the septum, and Ziem's article

on the physiology of the inferior turbinate

was soon to be published. Lothrop, Hartz,

and others also had called attention to the

functional importance of the inferior turbina-

ces, and Courand's graphic measurement of

the permeability of the nasal fossae had

appeared in 1902. Chevalier Jackson's con-

clusion after observing for two or three

years his patients who, in addition to septal

resection, had had some partial or total

inferior turbinatectomy, was that his patients

had benefited greatly from the surgery. It

may be repeated, I feel, that a careful

scrutiny of nasal surgery a decade or two

after it is performed is necessary before

dependable scientific evaluations can be

made.

The beginning of rhinoplasty in early

times and its gradual slow growth is fairly

well known. A few brief remarks on some

of the highlights may be made.

The Edwin Strych Surgical Papers, 3000 B. C., mentions the treatment of nasal

fractures and the use of pressure dressings

postoperatively. In 600 B. C., the time of

Susruta, major restorations of the nose, re-

pair of the nasal tip from cheek flaps and

forehead flaps were done. The great Tagli-}

acchi brought to world notice the work of

the Trameus and his own epochal efforts. The

great master plastic surgeon of the 19th

century, Difffenbach, was responsible for

arousing further interest in partial and total

reconstruction of the nose. He also straight-

tened "twisted" noses. In 1897, John Rose

of Rochester, N. Y., probably was the first

to introduce intranasal incisions for rhino-

plasty. He was concerned with the reduction

of the bulbous tip and used cross-hatching

of the nasal cartilages for mobilizing them

and also with external molded splints. He

might probably be the one to be called the

originator of corrective rhinoplasty. He

did hump removals; he used cocaine for

local anesthesia. About the same time

Robert Weir of New York was concerned

with what may be termed minor rhinoplasti-

c procedures and probably was the first to

introduce the narrowing of the wide nase

by means of excisions at the base of the

turbinate. He performed lateral osteotomies

intranasally and used steel needles through

the nose to hold the mobilized bones in place.

He also reported the implantation in the

nose of the breast bone of a young chick.

Centers in 1895, in which the superior portions

of the upper lateral cartilages, bent them

anteriorly to their attachments to fill in a

depression in the dorsum of the nose—a

procedure which was reported again 50 years

later. As early as 1896 autogenous bone

was familiar with external molded splints.

Joseph and by many others of this

day. Many great masters of medicine


took up the literature he

reported a case of

rhioplasty which was reported again 50 years

later. As early as 1896 autogenous bone

was familiar with external molded splints.

Joseph and by many others of this

day. Many great masters of medicine


took up the literature he

reported a case of

rhioplasty which was reported again 50 years

later. As early as 1896 autogenous bone

was familiar with external molded splints.

Joseph and by many others of this

day. Many great masters of medicine


took up the literature he

reported a case of

rhioplasty which was reported again 50 years

later. As early as 1896 autogenous bone

was familiar with external molded splints.

Joseph and by many others of this

day. Many great masters of medicine


took up the literature he

reported a case of

rhioplasty which was reported again 50 years

later. As early as 1896 autogenous bone

was familiar with external molded splints.

Joseph and by many others of this

day. Many great masters of medicine


took up the literature he

reported a case of

rhioplasty which was reported again 50 years

later. As early as 1896 autogenous bone

was familiar with external molded splints.

Joseph and by many others of this

day. Many great masters of medicine


took up the literature he

reported a case of

rhioplasty which was reported again 50 years

later. As early as 1896 autogenous bone

was familiar with external molded splints.

Joseph and by many others of this

day. Many great masters of medicine


took up the literature he

reported a case of

rhioplasty which was reported again 50 years

later. As early as 1896 autogenous bone

was familiar with external molded splints.

Joseph and by many others of this

day. Many great masters of medicine


took up the literature he

reported a case of

rhioplasty which was reported again 50 years

later. As early as 1896 autogenous bone

was familiar with external molded splints.

Joseph and by many others of this

day. Many great masters of medicine


took up the literature he

reported a case of

rhioplasty which was reported again 50 years

later. As early as 1896 autogenous bone

was familiar with external molded splints.
familiar with lateral osteotomies done intra-nasally and without completely sawing through the bone. He was one of the first to mobilize the nasal bones freely and to use external splints.

This first decade of the 20th century was also one in which great contributions to the anatomy and embryology of our specialty were being made and outstanding work previously published was being reintroduced to the profession. The rhinologist's own acute interest in septum, nasal, and sinus surgery was the magnet which attracted him to these basic sciences. Anatomical contributions of Zuckerkandl were outstanding. This great master prepared and studied sections of the head and nose, and his research in comparative anatomy of sinuses and other nasal structures gave us many fundamental concepts. He described the paraseptal cartilages, which of course led to the suggestion of their involvement in septal deformities. Onolet in Europe and Loeb in America made telling contributions to the anatomical knowledge of the nose and sinuses. Sideler from Johns Hopkins, Talbot, and Fawcett, among others, were vitalizing embryological investigations which were of important interest to rhinologists. The studies in physiology of the nose by Zvarndeler and Mink provided in this decade the necessary for the development of extensive interest in nasal physiology and its relationship to the treatment of nasal diseases. In this country Hartz wrote about the peripheral stimulation of the nasal sensory nerves producing vascular contraction in other parts of the body. Andrew did research on dogs and found that occluding the nares resulted in loss of hair of the animal and that long after the stenosis was relieved the life span of the progeny was markedly reduced.

All of the foregoing and much more besides was going on 50 years ago, and yet on serious reflection all still seems important today. In the interim the newly developing advances in sinus surgery, otology, laryngology, and endoscopy absorbed the time and attention of the members of our specialty. Others took over much nasal surgery which the rhinologists had first explored and then partially abandoned. It is to the everlasting credit of Dr. Samuel Fomon that the oto-rhinolaryngologist was made aware of his great heritage and of his need to concern himself again with the problem of nasal corrective surgery.

Perhaps the greatest lesson one can learn from this outstanding decade in rhinology is that advancements in medicine go on. Some of the past must be integrated into the needs and the knowledge of the present. Revaluation and reassessment of the efforts of others and of ourselves is essential if the striving for the good and the true be our objective. Medicine, like all other forms of human activity, moves and changes, is dynamic, not static, and progresses ever onward toward a goal which may never be reached, but always is worth striving for.

As Jonathan Wright said, "Very frequently a new triumph of dexterity of invention in surgery leads to the erroneous assumption that a new era in the specialty has been inaugurated." We have seen many things considered original and new today which have been discovered or known long ago. Sir William Osler reminded us that advancements in medicine go on. Improvements in rhinology may discover that a second "golden" decade of our century is being reached, and that advancements in rhinology may not be too daring to hope that they will again enjoy surveying the men whose labours in the past have made the present possible.

Summary

Outstanding and significant contributions to nasal septum surgery, corrective nasal surgery, anatomy, and physiology were made during the first decade of the 20th century. The record of these achievements can be read with great profit today and is an inspiring stimulus for those working in these fields.

30 N. Michigan Ave.

BIBLIOGRAPHY

Historical Examination of a Window Resected Septum, Laryngoscope 27:95-102, 1910.

Summary

Outstanding and significant contributions to nasal septum surgery, corrective nasal surgery, anatomy, and physiology were made during the first decade of the 20th century. The record of these achievements can be read with great profit today and is an inspiring stimulus for those working in these fields.


Rhinoiogy 1900-1920

A Case of Deflected Septum Treated by Moore's Operation, J. Laryng. 18:398-399, 1908.


Pfeiffer, K.: Collodium after Nose Operations, Arch. Otol. 3:36, 1902.

Collodium as a Dressing after Internal Operations, J. A. M. A. 45:1075, 1905.


The Author of the Nose, Laryngoscope 11:476-477, 1901.


Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.

Das Indikations der operativen heilung, Rev. heil. der laryng. Par. 2:405-408, 1906.


Complete Submucous Resection of Spur and Deviations of Septum, Laryngoscope 14:721, 1904.


White, J. A.: A New Operation for the Correction of the Deformity Known as Saddle-Back Nose, "