ATLAS OF LOWER LIP RECONSTRUCTION
下唇再造术图谱

(德)余健民 著 Author: Yu Jianmin
余健民 绘图 Painting: Yu Jianmin
(余健民医学博士、口腔医学博士 Dr.med.Dr.med.dent.Yu Jianmin)

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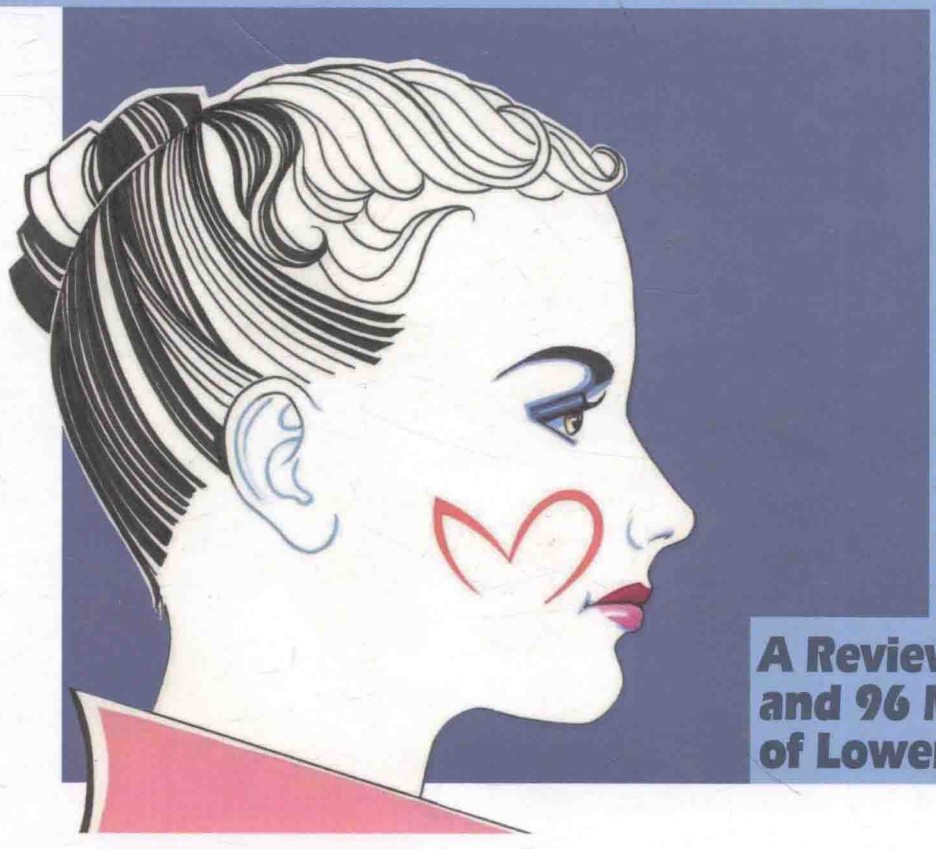

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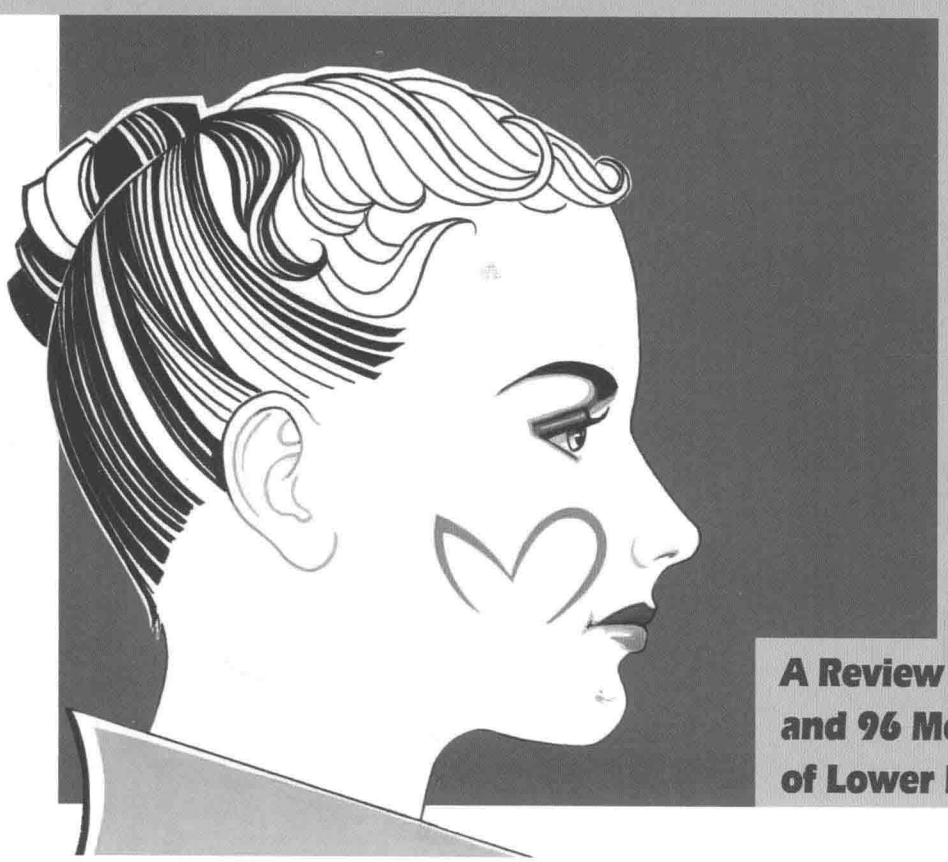

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沈阳

图书在版编目（CIP）数据

下唇再造术图谱 /（德）余健民著. —沈阳：辽宁科学技术出版社，2017.1
ISBN 978-7-5381-9949-9

Ⅰ. ①下… Ⅱ. ①余… Ⅲ. ①唇—整形外科手术—图谱 Ⅳ. ①R782.2-64

中国版本图书馆CIP数据核字（2016）第227895号

出版发行：辽宁科学技术出版社
（地址：沈阳市和平区十一纬路25号 邮编：110003）
印 刷 者：辽宁新华印务有限公司
经 销 者：各地新华书店
幅面尺寸：210mm × 285mm
印 张：10.5
插 页：4
字 数：220 千字
出版时间：2017 年 1 月第 1 版
印刷时间：2017 年 1 月第 1 次印刷
策 划 人：倪晨涵
责任编辑：陈 刚 苏 阳
封面设计：余健民 张 珩
责任校对：徐 跃

书 号：ISBN 978-7-5381-9949-9
定 价：128.00 元

投稿热线：024-23280336
邮购热线：024-23284502
E-mail:cyclonechen@126.com
http://www.lnkj.com.cn

作者简介

余健民，1969年毕业于中国医科大学，之后从事临床工作，学习口腔医学和在中国医科大学做口腔颌面外科医生工作，有时画手术和解剖图。1980年因亲自设计、解剖和制备手腕标本并绘制由中国医科大学编写的《实用解剖图谱》而获得中国国家奖，深受美国、德国、瑞士、奥地利等国著名专家的赞扬。

1982年后在德国弗里德里希-亚历山大-埃朗根-纽伦堡大学口腔颌面外科医院从事科研、教学和医疗工作。1995年获得医学博士学位证书和口腔医学博士学位证书，这两篇博士论文均获得最优秀成绩，又获得医生执业证书、口腔医生执业证书、口腔颌面外科专科医生证书和整形手术证书。他的诊所被当地评为五星级诊所。

1988年和Steinhaeuser教授、Janson教授编绘《颌骨矫正外科学》。独创“余氏下颌关节脱位复位法”和“余氏下唇再造术”。发表多篇医学论文。

自幼受父亲和叔叔艺术熏染，后师从大师周铁衡、霍安荣先生，在医疗工作之余，进行美术和书法创作，在德国不同城市举办了七次书画展。很多国家总统、国王、总理等收藏余健民为他们画的肖像画。1986年余健民获德国奥地利艺术家奖。

Brief Introduction of Author

Yu Jianmin, graduated from Chinese Medical University in 1969, then worked as a doctor and sometimes drew for Medical Operations and Anatomy, studied Stomatology and worked as an Oral and Maxillofacial Surgeon in China Medical University. In 1980, he won the national prize for personal design, dissection and preparation of hand and wrist specimen and drawing *Practical Anatomy Atlas* compiled by China Medical University, for which he gained great appraisal from famous professors coming from the USA, Germany, Swiss and Austria, etc.

From 1982, Dr. Yu began to take up research, teaching and medical treatment in Oral and Maxillofacial Surgery Hospital of University of Erlangen-Nuremberg (in German: Friedrich-Alexander-Universität Erlangen-Nuernberg)in Germany. Until 1995, he had been honored with MD degree and MD degree in Stomatology. His two doctoral dissertations were both top graded. At the same time, he had been awarded Doctor's Practical Certificate, Oral Doctor's Practical Certificate, Certificate of Oral and Maxillofacial Surgeon and Certificate of Plastic Surgery. His clinic is rated as Five-Star clinic by patient.

Dr. Yu Jianmin compiled and drew *Maxilloorthopedic Surgery* together with Prof. Steinhaeuser and Prof. Janson in 1988. Original therapy: "Yu's replacement of mandibular joint dislocation" and "Yu's lower lip reconstruction". And Dr. Yu has published many medical research articles.

Being influenced by his father and uncle for art from the childhood, later study with the masters Mr. Zhou Tieheng and Mr. Huo Anrong, Dr. Yu often makes painting and calligraphy creation after medical work. He had held Painting and Calligraphy Exhibition for 7 times separately in different cities of Germany. Many presidents, kings and prime ministers over the world collect portraitures that Dr. Yu created for them. Dr. Yu Jianmin ever won German-Austrian Artist Award in 1986.

序言（1）

本书是关于下唇由于病变施术后造成缺损进行修复再造术的参考工具书。通过文字和插图描述了从1823年开始的DELPECH技术到今天一共192年的时间段里95种不同的技术后，余健民博士提出并研发了自己新的、可运用于下唇缺损2/3情况下的下唇修复技术。书中，余博士详细介绍了所有的手术方法，促进了口腔颌面外科在下唇修复再造领域的进一步发展，并对由于病变或创伤造成下唇缺失需要进行修复的患者有所帮助。

1980年余博士由于绘制了《实用解剖图谱》上下肢部分的插图获得了中国国家奖。余博士凭借其精湛的绘画艺术能力，用208幅精准的插图，完成了对下唇修复再造技术的论述和总结，并最终编辑成册。本书对于未来口腔颌面外科和整形手术的学习提供了巨大的帮助。1989年他的文章《肿瘤切除术后下唇再造新方法》发表于医学专业期刊《European Journal of Plastic Surgery》，此后获得了欧洲众多同行对此方法的优越性、重要性和创新性的认可。

当时德国弗里德里希-亚历山大-埃朗根-纽伦堡大学口腔颌面外科医院、口腔颌面外科门诊医院院长Dr.E.Steinhäuser教授评价余博士，首先是一名医生和口腔颌面外科领域的专家，在拥有无与伦比的医术同时，还是一位艺术家。此外，医院里的所有医生都能从余博士的实践知识中获益。他的艺术家天赋是对其医术的完美补充。余博士也是一位具有高贵品质的同事，这一点得到了他所在医院上司、助手以及患者的充分肯定。本书特别是对于年轻的同行提供了大量的参考。它的完整性大大方便了下唇修复再造术选择完美方法的检索。

本书使用两种文字编写，即中文和英文。由此对于医学学生，包括一般外科、整形外科以及口腔颌面外科学生学习不同语言在专业术语上的表达提供有价值的参考。与该书同时出版的还有余先生的《面颈部美容外科手术彩色图谱》，余博士的这本著作在其专业领域中有无与伦比的价值，同时对于新一代的同行同样有着巨大的帮助。

滕卫平　教授

原中国医科大学校长（2000年9月—2003年9月）

2014年5月26日

Foreword (1)

This book is a compendium for the reconstruction of the lower lip after defect resection. After description and illustration of 95 methods of lower lip reconstruction from around the world that have begun with the technique according to DELPECH in 1823 and therefore cover a period of 192 years, Dr. Dr. Yu Jianmin made a breakthrough with a new method of reconstructing a new lower lip with a defect of two thirds. All operation methods were vividly illustrated by Mr. Yu. This gave impetus to further development of oral and maxillofacial surgery in the area of lower lip reconstruction which could help patients to obtain a new lower lip that was lost through illness or trauma.

In 1980 Mr. Yu was awarded the National Award of China for his drawn figures in the *Atlas of Practical Anatomy* that is dedicated to the upper and lower limbs. He used his superb painting skills to make a summary of the methods with 208 highly precise and masterly figures that became a picture compendium of lower lip reconstruction. This book provides a great convenience for future study of oral and maxillofacial as well as plastic surgeries. In 1989, his article titled, *A New Method for Reconstruction of the Lower Lip after Tumor Resection* was published in the medical magazine *European Journal of Plastic Surgery*. After publication of this article, many European peers thought that this method is outstanding, prominent and innovative.

The former director of the Clinic and Polyclinic of Oral and Maxillofacial Surgery at the Friedrich-Alexander-University Erlangen-Nuremberg Professor Dr. Dr. E. Steinhäuser wrote in his evaluation that Mr. Yu has an extraordinary talent as a physician and artist and that he is an excellent doctor and specialist for maxillofacial surgery. Furthermore, all doctors of the clinic can benefit from his surgical knowledge. His artistic gift is an ideal addition to his medical competence. Mr. Yu is an extremely valuable colleague who is tremendously appreciated by his superiors and co-workers as well as his patients. This book is a particularly valuable reference for younger colleagues. It can facilitate researching the perfect method for lower lip reconstruction, thanks to its completeness.

This book is illustrated in two languages: Chinese and English. It is a valuable reference for medical

students as well as general, plastic, oral and maxillofacial surgeons to study medical terms of the respective languages. With this book, Mr. Yu publishes another *A Color Atlas of Aesthetic Surgery of the Face and Neck*. His work has made an unmatched contribution to this field and will be a great benefit to future generations.

Professor Teng Weiping

Former President of the Medical University of China

Date of Term: September 2000 until September 2003

May, 26th 2014

序言（2）

本书由余健民博士撰写。余博士曾学习和工作于沈阳的中国医科大学。该校以解剖学著称，并拥有研发中国皮瓣的优秀师资队伍。作为一名学生，余博士能够从这样的经历中获益，并在完成学业后开始各类撰写、绘画工作。

他是一位拥有丰富颌面解剖知识，且才华横溢的外科医生。除了这些卓越的手术技巧，他也是一位艺术家，能够创作出色的解剖图。他渊博的人类解剖学知识、出色的手术经验和艺术技巧都被融汇到了这本下唇再造书中。

除外伤，唇癌是下唇不足的主要原因之一。通过这种外科手术达到良好审美和功能恢复是高质量生活的必要前提。

余博士给出了192年来96种下唇再造术回顾。在介绍中，显示口周区域的解剖结构。在给出唇部再造的外科手术，即通过直接缝合、推进皮瓣、旋转皮瓣、远位皮瓣之后，余博士提出了他的下唇再造方法，对外科手术给出了很多有价值的建议，并通过精湛的绘画描述方法表达出他的外科手术过程。

此书以可理解和明确的方式编写为中文和英文，阅读时简单快捷。为了能更好地便于理解，手术操作的途径和过程用大量优秀绘图来说明。总之，本书为每一位处理再造手术的医生，尤其是为下唇再造建立了一个非常有价值的标准。

总而言之，本书为我们的医生提供了不可估量的价值。

Jörg Wiltfang博士主任教授

口腔颌面外科

德国Schleswig–Holstein大学医学中心

Foreword (2)

This book has been written by Dr. Dr. Yu Jianmin. Dr. Yu has studied and worked at Chinese Medical University in Shenyang. This institution is especially famous for its anatomical institute and the excellent teaching staff which has developed the "Chinese Flap". As a student, Dr. Yu was able to profit from this experience and also contributed drawings to various works after finishing his degrees.

He is a brilliant reconstructive surgeon with profound knowledge in craniofacial anatomy. Besides these outstanding surgical skills, he is an artist and able to create excellent anatomic drawings. His profound knowledge of the anatomy of the human being, his excellent surgical experience and his artistic skills are united in this textbook of lower lip reconstruction.

Besides traumatology, lip cancer is one of the main reasons for lower lip deficiencies. Achieving a favourable aesthetic and functional outcome is the prerequisite for high life quality following this kind of surgery.

Dr. Yu gives a review of 192 years and 96 methods of lower lip reconstruction. Following the introduction, the anatomy of the perioral region is shown. After giving a survey of the possibilities of lip reconstruction with direct approximation, advancement flaps, rotation flaps and distant flaps, Dr. Yu shows his methods of lower lip reconstruction, giving very valuable hints for this kind of surgery. His surgical procedures are illustrated by excellent drawing and descriptions of the methods.

The book is written in Chinese and English in an intelligible and unambiguous language and thus can be read in a simple and quick way. For better comprehensibility, operated access paths and procedures are illustrated by excellent drawing in large numbers. In conclusion, this book is a very valuable edition for every colleague dealing with reconstructive surgery, especially with lower lip reconstruction.

All in all, this book is full of treasures for our colleagues.

Director Prof. Dr. Dr. Jörg Wiltfang

Department of Oral and Maxillofacial Surgery

University Medical Center Schleswig-Holstein

著者前言

本书中我运用大量插图总结阐述了我自己研创的下唇再造技术。这也是我在德国弗里德里希-亚历山大-埃朗根-纽伦堡大学医学院博士论文课题研究的主要内容。为尽可能保证整篇著作毫无错漏，我进行了详细的资料检索。希望从口腔颌面外科、整容及一般外科角度在下唇再造方面提供理想的帮助。

任何领域新技术的开发都需要基础知识构建的坚实基础。对于每一位医学研究者来说，人类解剖学这一学科就是其专业领域中最重要的组成部分。著名的“中国皮瓣”是由沈阳中国医科大学的解剖学李吉教授和陆军总院外科杨果凡医生研究和发明的。手术需要先通过特殊的方式灌注一种液体来使前臂的血管明显变红可见。然后通过复杂而费时的过程将血管从周围分离。当除去所有其他结缔组织之后就可以得到纯粹的前臂血管网。显微血管外科杨医生可以通过桡动脉或尺动脉和其伴随的静脉创建带蒂皮瓣并成功运用于显微血管外科。关于此技术的文章也在医学专业杂志上发表。这一前臂皮瓣也被正式命名为“中国皮瓣”。1976年在我写作《实用解剖图谱》的工作过程中，有幸与李教授有过接触。他向我展示了前臂血管网-血管铸型。我亲眼目睹了这一极富魅力的工艺品，并被其深深打动且留下深刻印象。今天，“中国皮瓣”是在医学领域唯一被冠以“中国”字样的专有名词，这是沈阳中国医科大学的骄傲。如果没有李教授在解剖学方面全面的知识，“中国皮瓣”就不可能研发成功。当时这也使我意识到必须努力学习人体解剖学才能成为一名优秀的外科医生。我当时用心、细心地投入，为以后研发下唇再造新技术打下了坚实的基础。

在此我要衷心感谢加拿大魁北克省蒙特利尔St.Mary's医院的Mercier教授。他在1987年和1988年希望我去加拿大和他一起进行一部或多部世界级专业图谱的编制。为此他4次向我发出书面邀请，并2次来德国与我就此工作进行面谈。向我详细介绍了魁北克的风土人情，并希望我能够和他一起在蒙特利尔共事5年。但当时由于我无法在加拿大从事外科医生的工作，只得很遗憾地拒绝了他的邀请。虽然时间过去很久，但直到今天我还是从心里对Mercier教授充满无尽感激。感谢他对于我艺术和专业方面能力的高度认可和对于我人品方面的充分肯定。希望如果他能看到我的这本著作，能理解我当时的处境和做出的决定。

余健民

Editor's Words

In this book, I have comprehensively presented my new technique of lower lip reconstruction with the help of figures. This work was the essential part of my dissertation submitted for the fulfillment of the requirements for the doctoral degree at the Faculty of Medicine of the Friedrich-Alexander-University of Erlangen-Nuremberg in Germany. For this, I have conducted an in-depth literature research to compose a complete work. I hope that this book presents an ideal aid for oral and maxillofacial surgeons, plastic and general surgeons when performing lower lip reconstructions.

In every field, the development of a new technique demands a solid foundation of basic knowledge. The study of human anatomy is the most important part of their profession for every physician. The famous "Chinese Flap" was researched and developed in Shenyang by Professor for Anatomy Mr. Li Ji of the Chinese Medical University and the surgeon Mr. Yang Guofan of the main clinic of the ground forces. Using a specific method, a liquid was injected to visualize the vessels of the forearm in a distinct red color. Then, the blood vessels were extracted from their environment by means of a complicated and laborious procedure. After removal of all other parts of the tissue, the pure blood vessel system could be displayed. From the arteria radialis and the accompanying vein, or the arteria ulnaris and the accompanying vein, the microvascular surgeon Yang could form a flap pedicle that was successfully used in microvascular surgery. An article on this technique was published in a medical journal. This forearm flap is officially called "Chinese Flap". While I was working on the *Atlas for Practical Anatomy* in 1976, I was fortunate to be in touch with Professor Li. Professor Li showed me the specimen of the vessel network casting mold of the forearm. To see this magnificent work of art with my own eyes, I was deeply moving and had a deep impression. Today, the "Chinese Flap" is the only term in the medical field that puts "China" first. It is the pride and joy of the Chinese Medical University in Shenyang. The "Chinese Flap" could only become so famous because Professor Li had comprehensive knowledge of anatomy. Even back then I knew that I had to study the human anatomy accurately to become a good surgeon. With meticulous commitment I was able to lay the foundation for developing a new lower lip reconstruction technique.

At this point, I want to give my sincere thanks to Professor Mercier of St. Mary's hospital in Montréal, Quebec. In 1987 and 1988, it was Professor Mercier's wish that together in Canada, he and I would create one

or more professional atlases on world-class level. He sent me 4 invitation letters and travelled to Germany twice to talk to me personally. He explained to me in detail the local conditions and the mentality in Quebec. He was hoping to win me over for a five-year cooperation in Montréal. Much to my regret, I had to decline this offer as I couldn't have worked as a surgeon there. But in my heart, I am still very grateful that Professor Mercier highly valued my artistic and professional abilities and had put great trust in me. Even though many years have passed, I am eternally grateful to this day. I hope that Professor Mercier will understand my motives and decisions after reading this book.

Yu Jianmin

简介

唇癌是介于口腔癌和皮肤癌之间的一种癌症。它多发于口周围皮肤和口腔黏膜的移行区域，即所谓边缘区。

唇癌多发于60～70岁的男性人群，而其中90%发生于下唇。患者以农村人口和社会中下层人士为主。引发病变的主要诱因是外源性的氮氧化物。首先要讨论的是气候因素，特别是太阳辐射。另一个引发癌变的因素是温度和化学的刺激，其主要来源于吸烟形成的蒸馏产物。唇癌尤其多发于唇部边缘中间或嘴角。其早期症状表现为组织肿大、过度角化以及相对应的表面呈乳头状覆盖的唇黏膜肿胀。还有可能表现为发展成溃疡的黏膜表面的侵蚀性变化（表面溃烂）。病程进展在宏观上可分为外生型和内生型两种。外生型多表现为乳头状增生，而内生型则主要表现为深层细胞组织的肿大和硬化以及部分溃烂。这两种病程进展多数情况下相互伴生，进而形成相类似的深度溃疡，周边硬化，边缘外翻高低不平的不均匀突起。由于溃疡的易感染性，使得对于淋巴结区域的临床评估比较困难。基本上表现为溃烂和浸润的病程进展型癌症比外生型病程进展的癌症更易于转移。相对于其他口腔癌症，唇癌发展较慢。根据统计，从发病到扩散至淋巴结平均病程为2年。转移的发生率低，一般会随着原发肿瘤的大小和病理组织后期分化程度而增加。基于所有T类别转移发生率在6%～14%，对于邻近淋巴结转移的治疗诊断存在不同的看法。一些作者由于原发性唇癌相对较低的淋巴结转移发生率，把临床怀疑现有的潜在的颈部淋巴结转移作为实施颈淋巴结根治性切除术的适应证，其他人则建议起码对于T2和T3型肿瘤基本上应实施预防性选择性颈部舌骨上区清除术。

98%发生于唇部的鳞状细胞癌是在下唇，这表明下唇癌的产生与环境因素中的光照直接相关。基底细胞癌与其相反，多发生于上唇。值得注意的是，发生于上唇的鳞状细胞癌虽然极少出现，却往往会在早期出现转移。很少在下唇部位发现唾液腺癌、黑色素瘤和肉瘤。和其他口腔癌症比较，下唇癌的诊断尤为便利准确。不考虑T分类系统，唇癌的5年治愈率公认为70%。绝大多数笔者对于原发性肿瘤的治疗相比放射性治疗更偏好于外科手术治疗。可采取的手术介入有：

1. 初期采取简单的楔形切除，创口直接愈合；
2. 当肿瘤大于1cm，切除并采取预防性措施，或选择同侧或双侧舌骨上淋巴结清除术；
3. 肿瘤转移至颈上淋巴结，切除同时实施同侧颈部淋巴结清除术。

在埃朗根口腔颌面外科医院，根据经验一般施行舌骨上淋巴结清扫术，当被证明出现淋巴结转移的情况时则扩大为单侧或双侧颈部淋巴结清除术。如果下唇的缺损超过下唇部的30%，大面积的缺损通过再造整容手术是必要的。

下唇再造的手术技术异常丰富，有些已有200多年历史。这些手术分为：直接缝合、邻近皮瓣和远位皮瓣。邻近皮瓣可分为：推进皮瓣、旋转皮瓣或两者相结合的皮瓣。

Abstract

Cancer of the lip holds a position between cancer of the oral cavity and skin cancer. Lip carcinomas generally begin in the region where the white area of the lip borders on the oral mucosa; this is the so-called vermilion border of the lip.

Men above 60 or 70 years of age are especially prone to carcinoma of the lip and in over 90% of cases it is the lower lip which is affected. The majority of patients are from rural populations and from the lower and middle social classes. In etiological terms, exogenous noxae play a deciding role. Climatic influences, especially exposure to the sun are in the focus of discussion. Further oncogenic factors are thermal and chemical irritation caused by the distillates resulting from smoking. Lip carcinoma occurrence is principally paramedian in the lipborder area or in the corner of the mouth. Early symptoms are a thickening of tissue, hyperkeratosis or papillary, scabby distension of the labial mucosa. Also possible are erosive changes in the mucosal surface which deteriorate to an ulcer. Macroscopically, exophytic and endophytic growth types can be distinguished. Growth of the exophytic type generally manifests as a papillomatous tumor while the endophytic type manifests as a primary thickening and induration of the deeper tissue layers, which then secondarily ulcerates. Often, both pathogeneses occur together. In the late stage the appearance is nearly identical: a deep ulcer with an indurated environment and distended, irregular margins. Because ulcers of this type may become superinfected, it is difficult to clinically assess the lymph node area. In principle, primary ulcerous carcinomas with an infiltrating growth pattern are more prone to metastasis than carcinomas which grow exophytically. The growth rate of lip carcinomas tends to be slower than that of other carcinomas of the oral cavity. Statistical studies have shown that lymphnode metastasis occurs on an average of two years after the beginning of the disease. The metastasis frequency is low but according to general findings increases with growth of the primary tumour and the pathohistologic degree of differentiation (STEIGLEDER, 1974) and is about 6% and 14% based on all T categories. Opinions about prognostic consequences of a therapy of the bordering lymphatic drainage system differ. Because of a relatively low incidence of lymphnode metastasis after primary lip carcinoma, some authors consider that a radical neck dissection is indicated only if there is clinical suspicion of preexisting neck lymphnode metastasis. Others recommend preventive or elective emptying of the suprahyoid region of the neck as mainstay, providing the tumors are T2 or T3.

In 98% of all cases, squamouscell carcinomas of the lip occur in the lower lip. There appears to be a direct link between exposure to environmental influences and the causation of lower lip cancer. In contrast, basalcell cancers are found mainly in the upper lip. It is noteworthy that the less commonly occurring squamouscell carcinomas of the upper lip show a disposition to earlier metastasis. Cancer of the salivary gland as well as melanomas and sarcomas have rarely been observed in the labial region. Prognosis of lower lip carcinomas is assessed as being considerably more favorable than that of other types of cancer of the oral cavity. A 5-year survival rate of 70% is assumed for lip cancer regardless of its T classification. In the literature, the vast majority of authors agree that surgical treatment of the primary tumor is preferable to radiological treatment. The following operative options exist:

1. simple wedge excision and primary adaptation of the wound edges in the early stages;

2. excision and preventive or elective homolateral or bilateral suprahyoid lymph node dissection when the tumor measures over 1 cm;

3. excision and ipsilateral neck dissection in the upper neck lymph nodes if metastasis has occurred.

In our experience at the Maxillofacial Clinic of Erlangen, suprahyoid lymph node dissection is carried out as a rule for diagnostic purposes. If lymph node metastasis is hereby discovered, surgery is then extended to neck dissection on one or both sides. If the defect of the lower lip involves over 30% of the labial area, primary defect coverage by means of reconstructive plastic surgery is indicated.

A remarkably high number of operative techniques for lower lip reconstruction exist, some of which are as old as 200 years. These operations are classified: direct approximation, those using local flaps for reconstruction and those using distant flaps. Within the local flap category, the following techniques can be distinguished: advancement flaps, rotation flaps and combinations of both.