

主编：常鹏飞
隋鸿锦
廉治刚

*ATLAS OF
NEUROSURGICAL
ANATOMY*

神经外科
解剖学 图谱



辽宁科学技术出版社
LIAONING SCIENCE AND TECHNOLOGY PUBLISHING HOUSE



神经外科解剖学图谱

ATLAS OF NEUROSURGICAL ANATOMY

主 编 常鹏飞 隋鸿锦 廉治刚

辽宁科学技术出版社

· 沈阳 ·

内容简介

《神经外科解剖学图谱》是以人体头部实物标本为材料,根据神经外科手术入路和特别部位进行解剖制作,然后拍照并经计算机图像处理,配以中英文说明而成的一部专著。全书包括18个章节、约200幅图片,涉及10几种常见的神经外科手术入路和特别部位的解剖结构。重点介绍与颅底手术有关的神经解剖关系,简明扼要、图文并茂。本图谱可供医药卫生院校教师、学生、解剖学工作者和临床医师学习和工作的参考,特别对神经外科、内科医生是一部实用的临床参考书。

图书在版编目(CIP)数据

神经外科解剖学图谱/常鹏飞等主编. —沈阳:
辽宁科学技术出版社, 2001.1
ISBN 7-5381-3220-1

I. 神… II. 常… III. 神经外科学: 解
剖学—图谱 IV. R 651-64

中国版本图书馆CIP数据核字(2000)第18691号

出 版 者: 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: 辽宁美术印刷厂

发 行 者: 各地新华书店

开 本: 787mm×1092mm 1/16

字 数: 310千字

印 张: 14.25

插 页: 4

印 数: 1—3 000

出版时间: 2001年1月第1版

印刷时间: 2001年1月第1次印刷

责任编辑: 倪晨涵

封面设计: 庄庆芳

版式设计: 于 浪

责任校对: 东 戈

定 价: 128.00元

编委会

主 编 常鹏飞 隋鸿锦 廉治刚

副主编 刘绍壮

摄 影 隋鸿锦 常鹏飞

编 委

常鹏飞 (大连医科大学第一附属医院)

隋鸿锦 (大连医科大学解剖学教研室,
大连医科大学生物塑化研究所)

廉治刚 (大连医科大学第一附属医院)

刘绍壮 (大连医科大学解剖学教研室)

于胜波 (大连医科大学解剖学教研室)

孟文件 (大连医科大学生物塑化研究所)

刘 杰 (大连医科大学生物塑化研究所)

序 言

神经外科学与神经解剖学是紧密相关的学科，特别是神经外科手术学必须以神经解剖学为基础。神经解剖学的发展促进了神经外科学的进展；现代神经外科手术学的发展，对神经解剖学提出了更高的要求，每一名神经外科医师都必须认真地进行神经解剖学的学习和研究才能提高神经外科手术的水平。我国神经外科在近10年来有了长足的进步，但各地发展很不平衡，特别是广大基层医院的神经外科医师仍需进一步加强显微神经外科的培训和系统的神经解剖学的学习和研究，以提高神经外科手术水平。

该书的作者从神经外科的角度出发，认真、系统地进行了神经外科解剖学的研究，并编成这本《神经外科解剖学图谱》。他们将神经外科学与神经解剖学巧妙地结合，按手术入路和部位，采用实体解剖的方法，使各种解剖结构能够清晰显示，并以彩色照片表现，使得这本神经外科解剖图谱简明扼要，图文并茂，具有较强的实用性和较高的学术水平。相信会对各级神经外科医师和解剖学教师及广大医学院校学生有所启示和帮助。

希望他们再接再厉，对我国的神外科及神经解剖学的发展做出更大的贡献。

中国工程院院士

中华神经外科学会主任委员

北京神经外科研究所所长

王忠诚 教授
1999.9.1

Foreword

Neurosurgery and neuroanatomy are closely related subjects, especially that neurosurgery must be based on neuroanatomy. The development of neuroanatomy forwards the development of neurosurgery; meanwhile the development of neurosurgery is asking more and more from neuroanatomy. To seriously study neuroanatomy is a must for surgeons to improve surgery levels. During the last 10 years, neurosurgery has had a considerable development, but the development is rather imbalanced geographically. Especially the primary level hospital surgeons need further microsurgery training and neuroanatomy study to improve neurosurgery level.

The authors of the book, standing on the neurosurgical point, conducted a systematic research on neuroanatomy and compiled this Atlas of Neurosurgery Anatomy. They associated neurosurgery with neuroanatomy wonderfully and used the real photo to show the surgical approaches and surgical site structures. The atlas is concise, practical and of high research level. I believe this book will be of great help to surgeons, anatomy teachers and medical students.

I wish they go on with the hard work and make more contributions to the development of neurosurgery and neuroanatomy of our country.

Professor: Wang Zhongcheng

Member of China Engineering Academy

Chairman of committee, Zhonghua Neurosurgery Association Director of Beijing Neurosurgery Research Institute

1999.9.1

前言

神经解剖学是神经外科手术学的基础,神经解剖学的发展促进了神经外科手术学的进展,同样,神经外科手术学的进展也要求先进的解剖学支持。近10年来,随着显微外科技术的应用和神经解剖学的发展,神经外科手术学已经发生了根本性的变化,许多神经外科的禁区已被打破,一些神经外科手术学的观念有所更新。但就我国的情况而言发展很不平衡,这与我们的临床神经解剖学研究和显微神经外科手术的普及推广的滞后有关。很久以来,国内尚缺乏全面系统的临床神经外科解剖学图谱。一般的神经解剖图谱和神经外科手术图谱仍采用绘图方式表达,临床应用有局限性。有鉴于此,我们结合临床工作实际,从神经外科医师的角度,对常用的神经外科手术入路及部位进行了认真的尸体解剖研究,并将学习中留下的彩色图片编成神经外科解剖图谱,希望能对那些尚无条件进行尸体解剖研究的青年医师有所帮助。

该书具有以下一些特点: 1. 从神经外科临床实践出发,以神经外科手术入路结合神经系统整体解剖结构集中反映神经系统局部的解剖结构。2. 以人体头部标本进行认真的解剖,采用实体彩色照片的形式反映出来,立体感强,更具真实性,便于临床参考。3. 图谱简明扼要,颇具直观性,使读者容易接受。4. 中英文两种文字说明便于学习与交流。由于我们学术水平不高,学识有限、缺乏经验,因此该书一定有不少缺点和错误,恳请各位前辈和同行批评指正。

编者

Preface

Neuroanatomy is the foundation of neurosurgery, and the improvement of neuroanatomy advances the development of neurosurgery. Meanwhile the development of neurosurgery needs the support of neuroanatomy. During the last 10 years, along with the development of microsurgery and neuroanatomy, neurosurgery had undergone fundamental changes, many unopened neurosurgical fields were cultivated and many new concepts about neurosurgery arose. Nevertheless, the development of neurosurgery in our country is rather imbalanced, which is caused by lack of clinical neuroanatomy research and wide practice of microneurosurgeries. For a long time, there was not a comprehensive and systematic anatomy atlas for clinical neurosurgery, and the available atlas of neuroanatomy or neurosurgery, whose pictures were drawn, had very limited practical usage. Therefore, based on our clinical practice and from a surgeon's point of view, we conducted an anatomical research on commonly used neurosurgical approaches and anatomical sites and compiled this Atlas of Neurosurgery Anatomy based on the colored photos taken during the research. We hope the atlas can be of help for young surgeons who have no conditions to conduct anatomy research. The atlas possesses the following characteristics: 1. For the purpose of clinical practice, the local anatomical structures are shown based on neurosurgical approaches and the whole nervous system anatomy. 2. The head is thoroughly dissected and is shown by real photos, which are third dimension effective, real and convenient for clinical references. 3. The atlas is concise, direct and can be easily read by readers. 4. The language is in both Chinese and English, making international communications more easier. There may be some errors in the atlas due to our limited knowledge, any suggestions and advises is welcome.

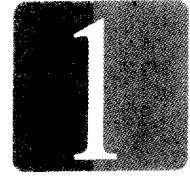
author

目 录

1 脑及其外部结构解剖	1
2 颅脑内部结构解剖	25
3 脑动脉环及其主要分支	58
4 经额部到前颅窝底的解剖	72
5 经翼点入路到鞍区的解剖	79
6 经颞下到鞍区的解剖	87
7 经额底和经外眶入眼眶的解剖	99
8 经口鼻蝶窦到鞍区的解剖	107
9 经眶、颧、额到鞍区的解剖	118
10 经幕上下联合入路到岩斜区的解剖	127
11 经枕部幕上、下入路到松果体区的解剖	136
12 经额颞到海绵窦的解剖	150
13 经迷路到脑桥小脑三角的解剖	159
14 经枕下到脑桥小脑三角的解剖	166
15 经远外侧入路到下斜坡及颅颈交界处的解	174
16 经乳突到颈静脉孔的解剖	193
17 经口咽入路到下斜坡的解剖	199
18 脑室系统手术入路及解剖	205

Contents

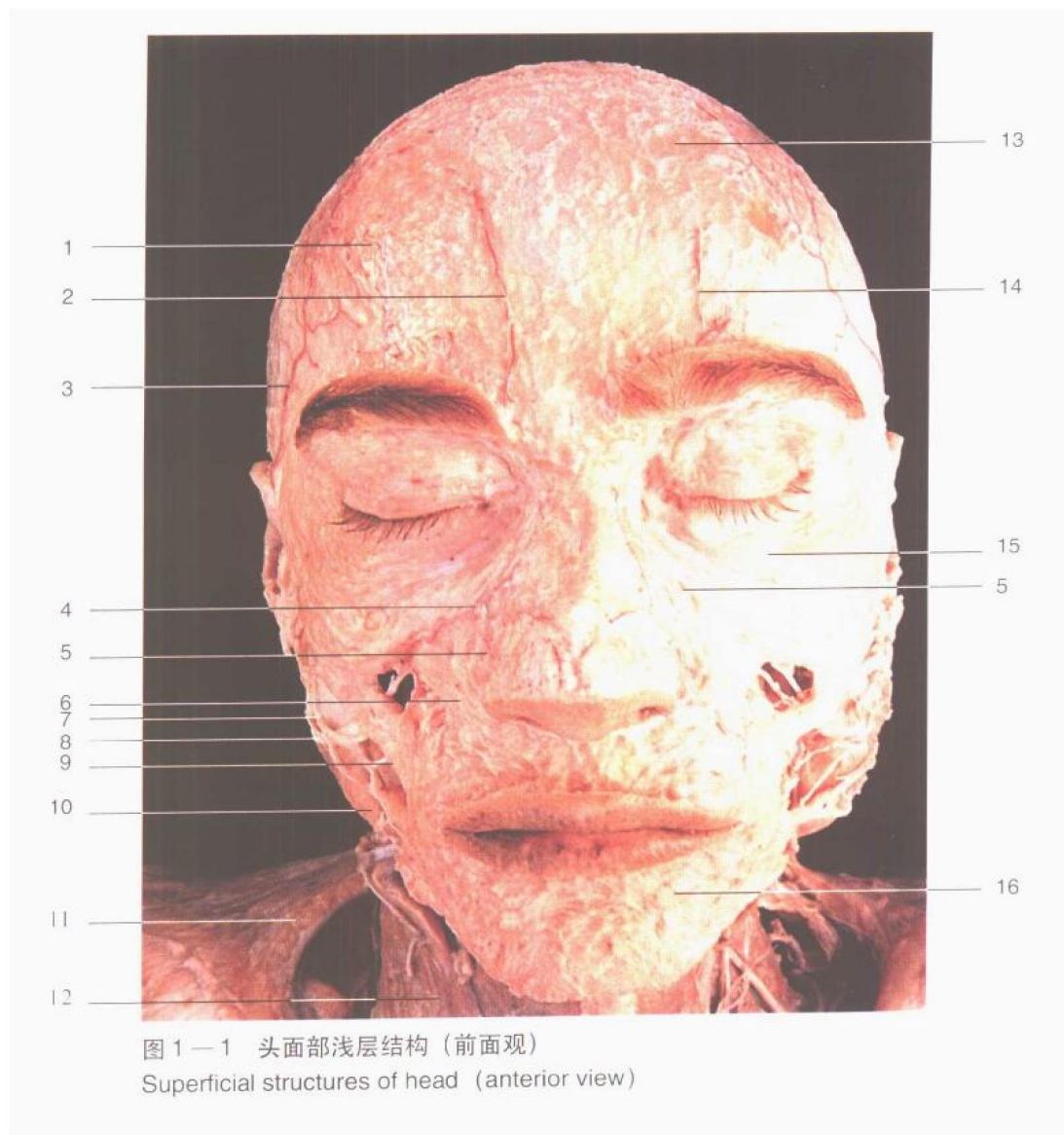
1. Brain and External Structures	1
2. Intracranial and Cerebral Structures	25
3. Cerebral Arterial Circle and Its Principal Branches	58
4. The Anatomical Structures in Trans-Frontal Approach to Anterior Cranial Fossa	72
5. Anatomical Structures in Trans-Pterional Approach to Sellar Region	79
6. Anatomical Structures in The Trans-Subtemporal Approach to Sellar Region	87
7. Anatomical Structures in The Trans-Subfrontal and Trans-Lateral Orbital Approach to The Orbital Cavity	99
8. Anatomical Structures in Trans-Oral, Nasal, Sphenoidal Sinus Approach to Sellar Region	107
9. Anatomical Structures in The Trans-Orbital, Zygomatic, Frontal Approach to Sellar Region	118
10. Anatomical Structures in The Trans-Superior and Inferior Tentorium of Cerebellum Approach to The Region of Petrous and Clivus	127
11. Anatomical Structures in The Occipital Trans-Superior and Inferior Tentorium Approach to The Region of Pineal Body	136
12. Anatomical Structures in The Trans-Frontal and Temporal Approach to The Cavernous Sinus	150
13. Anatomical Structures in The Trans-Labyrinth Approach to the Pontocerebellar trigone	159
14. Anatomical Structures in The Trans-Suboccipital Approach to The Pontocerebellar trigone	166
15. Anatomical Structures in The Occipital and Cervical Joint Region and The Trans- Farlateral Approach to the Inferior Clivus	174
16. Anatomical Structures in the Trans-Mastoid Process Approach to the Jugular Foramen	193
17. Anatomical Structures in the Trans-oral and Pharynx Approach to the Inferior Clivus	199
18. Operative Approach and Anatomical Structures of Ventricle System	205



脑及其外部结构解剖

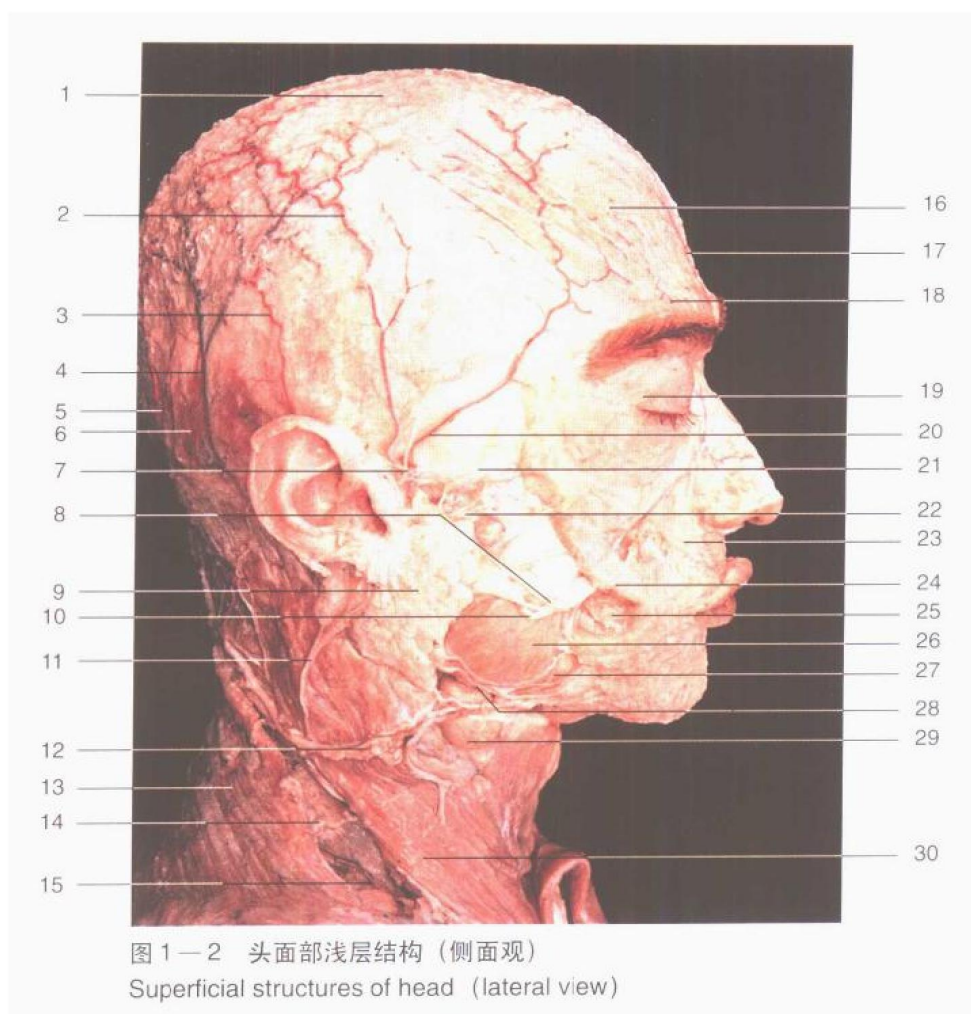
Brain and External
Structures

神
经
外
科
解
剖
学
图
谱

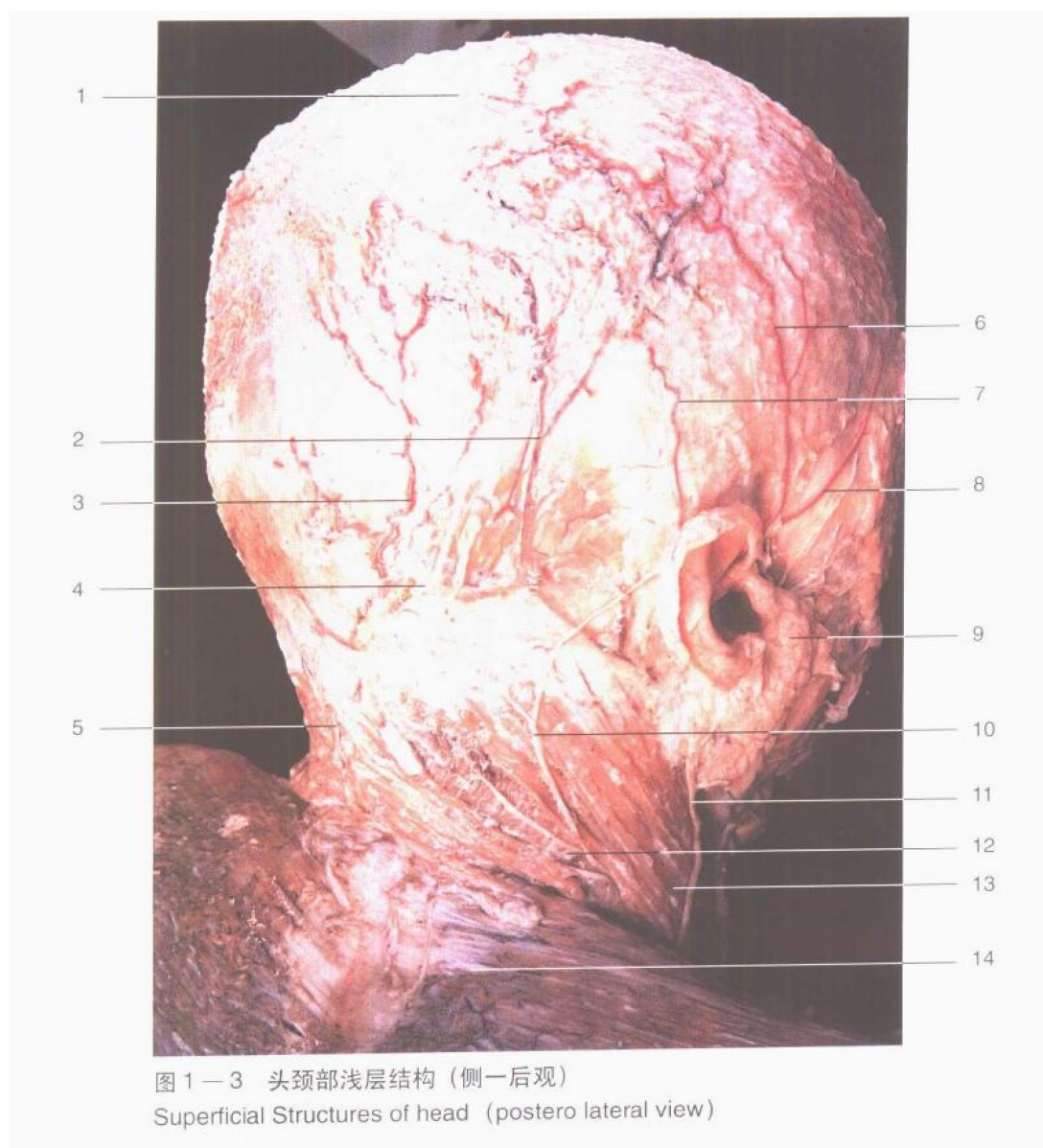


- 1 额腹（枕额肌） Frontal belly(occipitofrontalis)
- 2 滑车上动脉、神经 Supratrochlear a., n.
- 3 额支（颞浅动脉） Frontal branch(Superficial temporal a.)
- 4 面动脉 Facial a.
- 5 提上唇鼻翼肌 Levator labii superioris alaeque nasi
- 6 提上唇肌 Levator labii superioris
- 7 颊支（面神经） Buccal branches(facial n.)
- 8 腮腺管 Parotid duct

- 9 颧大肌 Zygomaticus major
- 10 咬肌 Masseter
- 11 斜方肌 Trapezius
- 12 胸锁乳突肌 Sternocleidomastoid
- 13 帽状腱膜 Galea aponeurotica
- 14 眶上动脉、神经 Supraorbital a., n.
- 15 眼轮匝肌 Orbicularis oculi
- 16 口轮匝肌 Orbicularis oris



- | | |
|--|--|
| 1 帽状腱膜 Galea aponeurotica | 15 颈横动脉 Transverse cervical a. |
| 2 顶支 (颞浅动脉) Parietal branch(superficial temporal a.) | 16 枕额肌额腹 Frontal belly(occipitofrontalis) |
| 3 枕支 (耳后动脉) Occipital branch(posterior auricular a.) | 17 滑车上动脉 Supratrochlear a. |
| 4 耳后静脉 Posterior auricular v. | 18 眶上动脉 Supraorbital a. |
| 5 枕动脉 Occipital a. | 19 眼轮匝肌 Orbicularis Oculi |
| 6 枕腹 (枕额肌) Occipital belly(occipitofrontalis) | 20 额支 (颞浅动脉) Frontal branch(superficial temporal a.) |
| 7 耳颞神经 Auriculotemporal n. | 21 颞支 Temporal branches |
| 8 颊支 Buccal branches | 22 颧支 Zygomatic branches |
| 9 腮腺 Parotid gland | 23 提上唇肌 Levator labii superioris |
| 10 腮腺管 Parotid duct | 24 颧大肌 Zygomaticus major |
| 11 耳大神经 Great auricular n. | 25 颊肌 Buccinator |
| 12 颈横神经 Transverse nerve of neck | 26 咬肌 Masseter |
| 13 斜方肌 Trapezius | 27 面动脉 Facial a. |
| 14 副神经 Accessory n. | 28 下颌缘支 Marginal mandibular branch |
| | 29 下颌下腺 Submandibular gland |
| | 30 胸锁乳突肌 Sternocleidomastoid |



- 1 帽状腱膜 Galea aponeurotica
- 2 耳后静脉 Posterior auricular v.
- 3 枕动脉 Occipital a.
- 4 枕大神经 Greater occipital n.
- 5 第三枕神经 Third occipital n.
- 6 顶支 (颞浅动脉) Parietal branch(superficial temporal a.)
- 7 枕支 (耳后动脉) Occipital branch(posterior auricular a.)

- 8 额支 (颞浅动脉) Frontal branch(superficial temporal a.)
- 9 腮腺 Parotid gland
- 10 枕小神经 Lesser occipital n.
- 11 耳大神经 Great auricular n.
- 12 头夹肌 Splenius capitis
- 13 胸锁乳突肌 Sternocleidomastoid
- 14 斜方肌 Trapezius

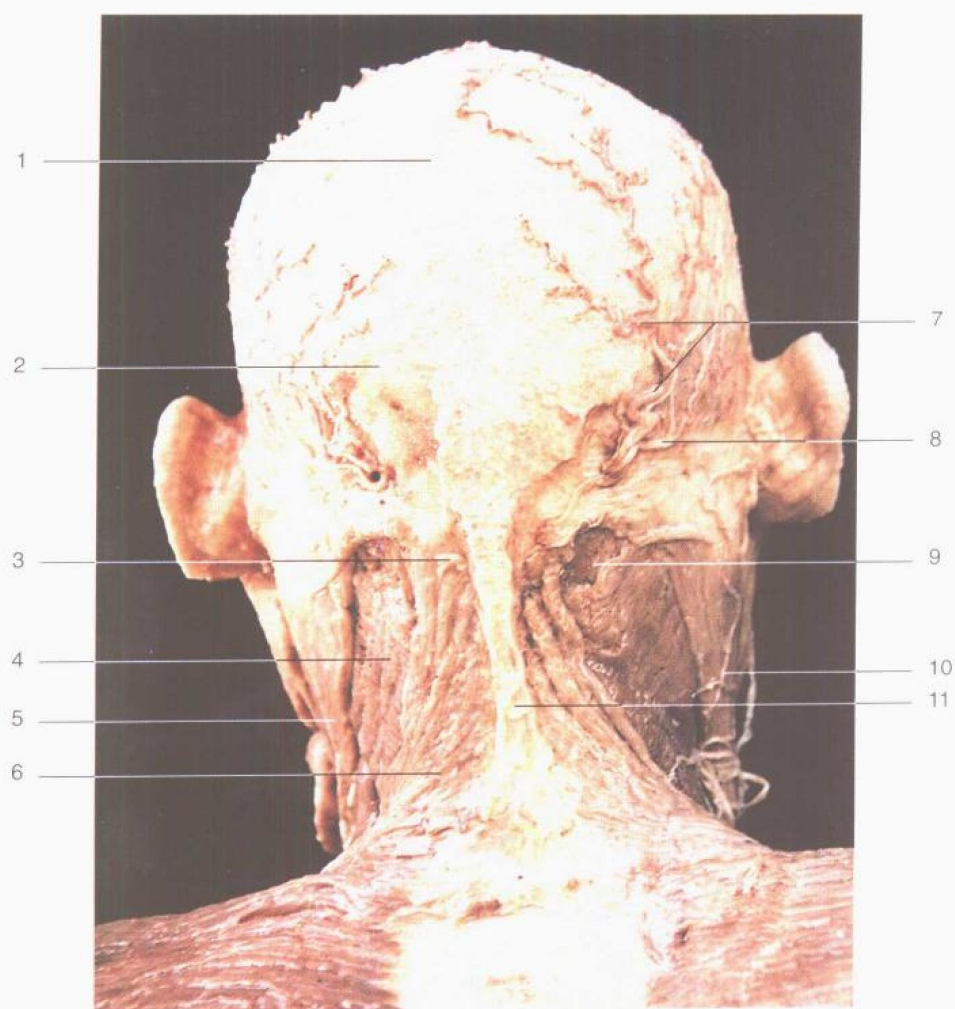


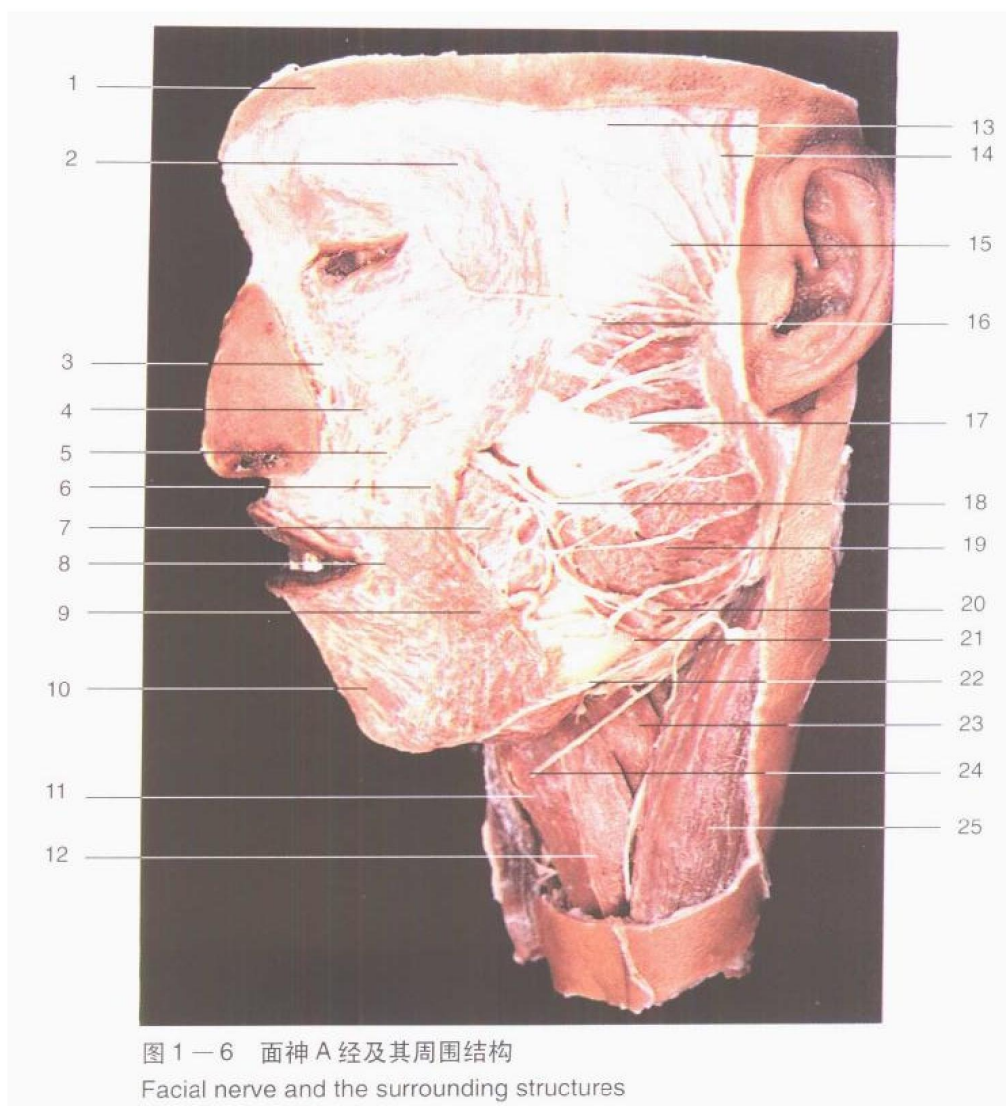
图 1—4 头颈部浅层结构（后面观）
Superficial Structures of head (posterior view)

- 1 帽状腱膜 Galea aponeurotica
- 2 枕骨 Occipital bone
- 3 第三枕神经 Third occipital n.
- 4 头夹肌 Splenius capitis
- 5 胸锁乳突肌 Sternocleidomastoid
- 6 斜方肌 Trapezius
- 7 枕动脉 Occipital a.
- 8 枕大神经 Greater occipital n.
- 9 头半棘肌 Semispinalis capitis
- 10 枕小神经 Lesser occipital n.
- 11 项韧带 Ligamentum nuchae



图 1—5 眼周围浅层结构
Superficial Structures around the eye

- 1 眶上神经 Supraorbital n.
- 2 滑车上动脉 Supratrochlear a.
- 3 内眦动脉 Angular a.
- 4 内眦静脉 Angular v.
- 5 面静脉 Facial v.
- 6 面动脉 Facial a.
- 7 皮肤 Skin
- 8 眼轮匝肌 Orbicularis oculi



- | | |
|--|------------------------------------|
| 1 皮肤 Skin | 14 颞浅动脉 Superficial temporal a. |
| 2 眼轮匝肌 Orbicularis oculi | 15 颞支 Temporal branches |
| 3 提上唇鼻翼肌 Levator labii superioris alaeque nasi | 16 颧支 Zygomatic branches |
| 4 提上唇肌 Levator labii superioris | 17 腮腺管 Parotid duct |
| 5 颧小肌 Zygomaticus minor | 18 颊支 Buccal branches |
| 6 颧大肌 Zygomaticus major | 19 咬肌 Masseter |
| 7 颊肌 Buccinator | 20 面静脉 Facial v. |
| 8 口轮匝肌 Orbicularis oris | 21 面动脉 Facial a. |
| 9 降口角肌 Depressor angular oris | 22 下颌缘支 Marginal mandibular branch |
| 10 降下唇肌 Depressor labii inferioris | 23 甲状舌骨肌 Thyrohyoid |
| 11 胸骨舌骨肌 Sternohyoid | 24 颈支 Cervical branch |
| 12 肩胛舌骨肌 Omohyoid | 25 胸锁乳突肌 Sternocleidomastoid |
| 13 颞浅筋膜 Temporal fascia. | |