



整形美容专业国家级质控中心



浙江省整形美容质量控制中心

# 耳部注射并发症的防治

整形美容专业国家级质控中心注射美容亚专业学组

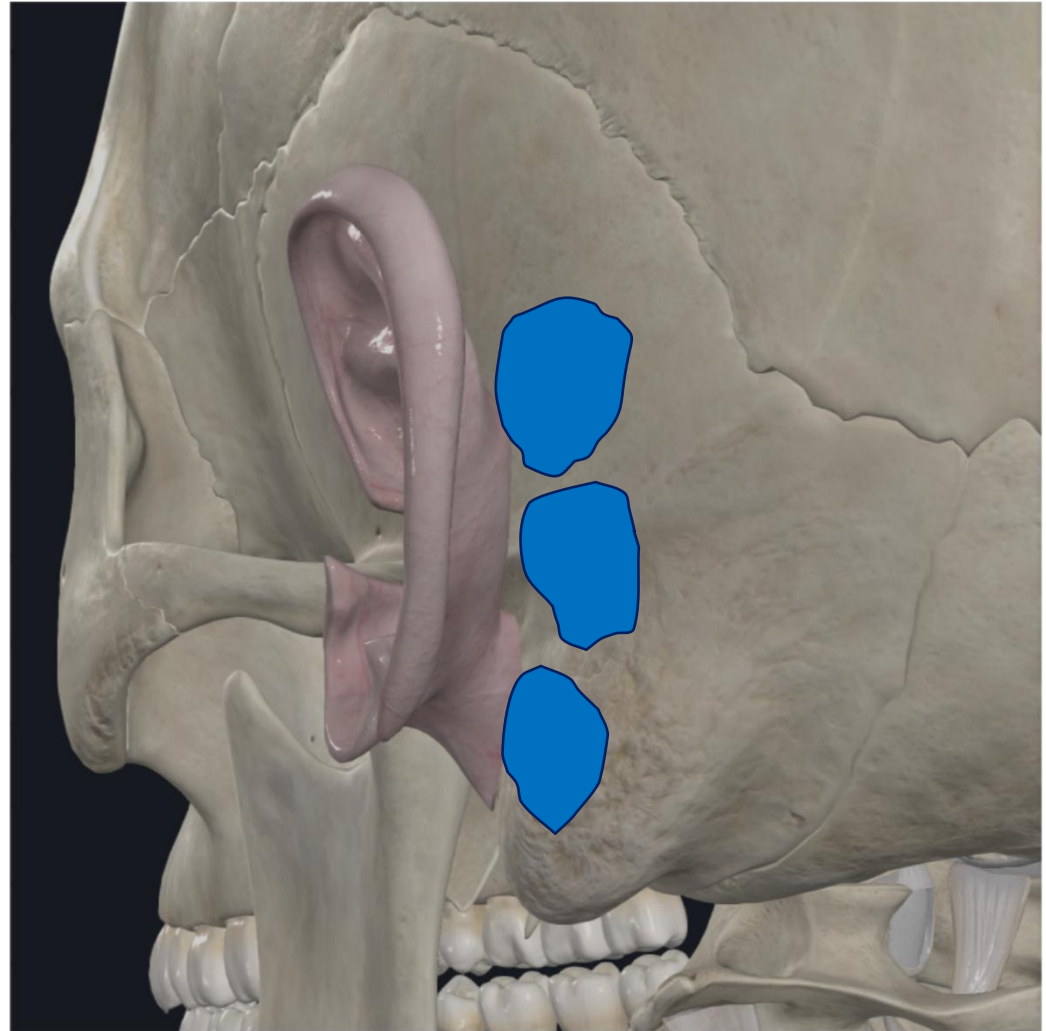
浙江省整形美容质控中心

2024年3月5日

# 耳部注射的部位



- 耳后
- 乳突区





# 耳部注射的并发症

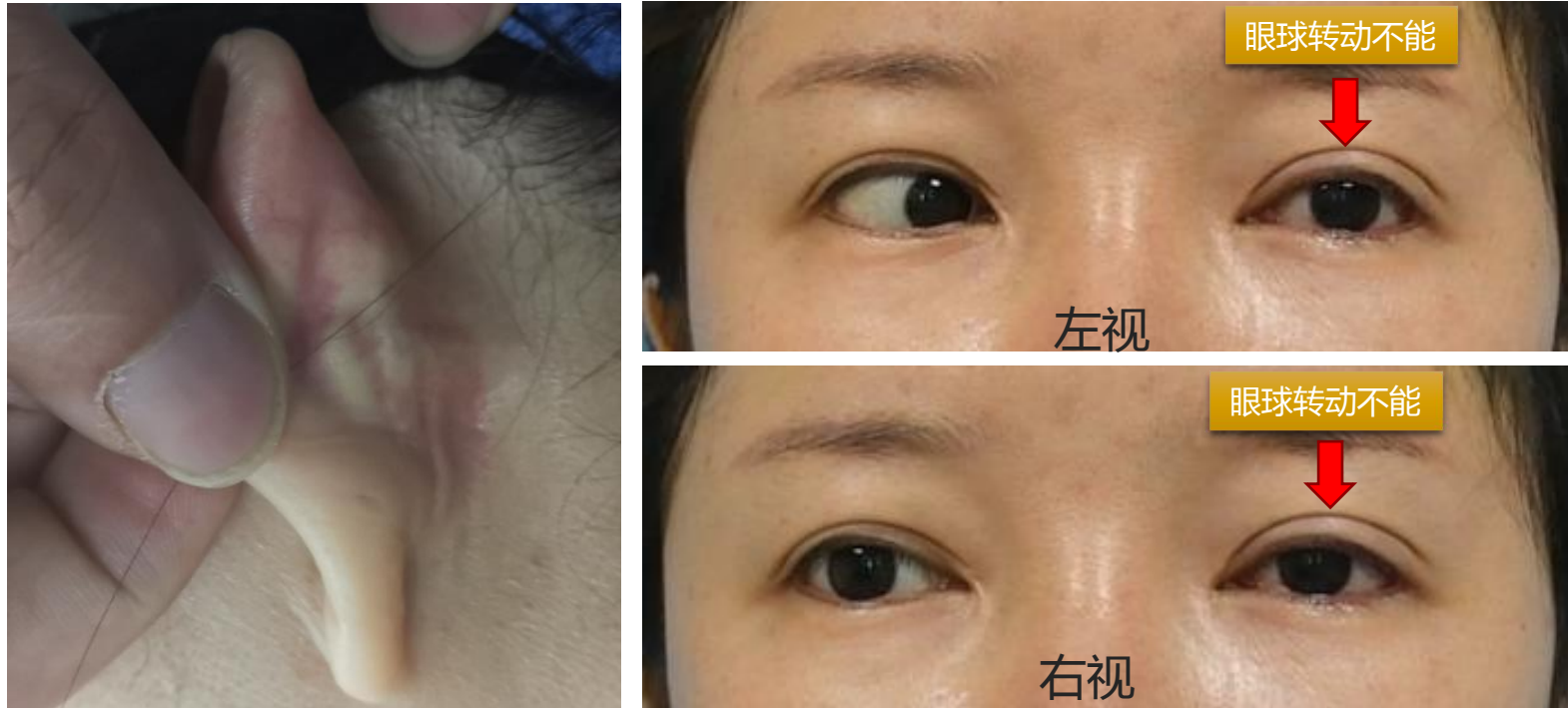


1. 血管栓塞：失明、软组织坏死
2. 神经压迫：面神经
3. 听力障碍：外耳道堵塞、鼓室挤压
4. 骨吸收：有待长期观察



# 血管栓塞—失明、软组织坏死

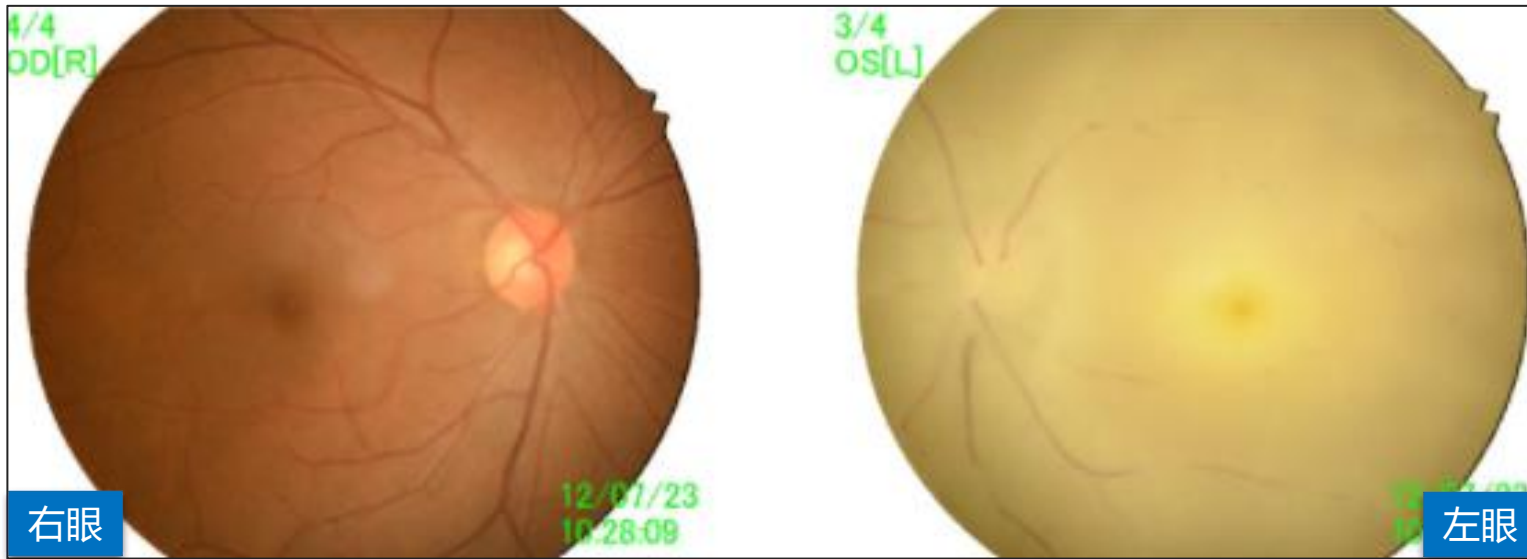
# 耳部注射导致的同侧失明



女性，36岁，左侧耳基底注射透明质酸后，即刻出现恶心、呕吐、左眼黑蒙。注射剂量5ml，锐针注射，术后即刻注射术区出现疼痛，伴恶心、呕吐，后诉出现左眼疼痛伴视物不能，左眼球活动受限。

孙中生教授提供病例

# 眼底照片及CT照片



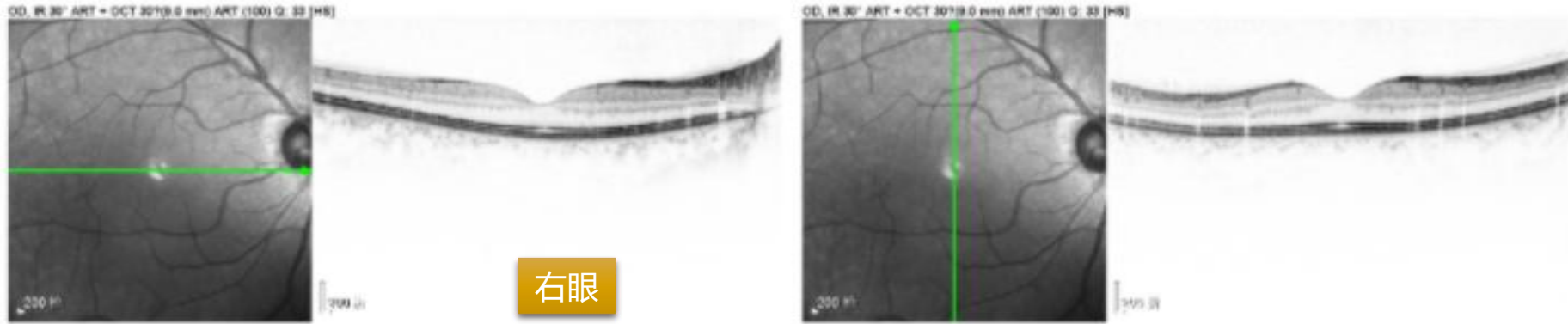
## 影像学：

- 头颅CT血管造影：**左侧眼动脉及其分支未见显影，考虑栓塞可能**，请结合临床。
- 眼眶MR：**1.左侧眼动脉未见明确显影，考虑栓塞**，请结合临床。**2.左眼视神经及眼外肌缺血、水肿改变，左眼视神经周围异常强化，考虑炎性反应**，请清结合临床。3.颅脑MRI及MRA未见异常。

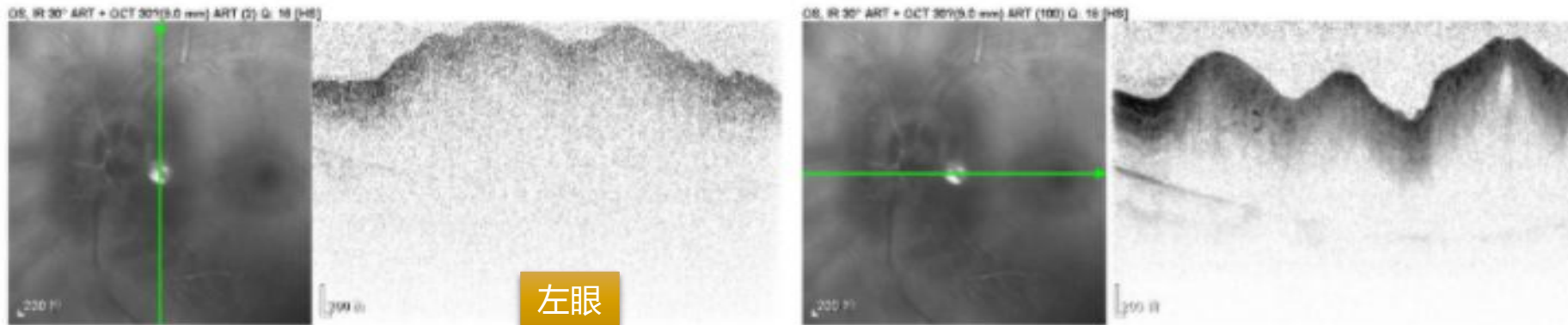
## 眼科专科检查：

- 眼底检查：视盘水肿，视网膜苍白水肿，黄斑区呈樱桃红色，**视网膜动脉全堵塞**，可见视网膜静脉血管。
- OCT：左眼视网膜水肿，结构紊乱。右眼黄斑区大致正常。
- 双眼眼底动脉荧光造影（PE）：左眼眼底动脉无显影，背景荧光缺如。右眼眼底动脉造影大致正常，充盈时间未见延迟。

# 眼底OCT检查



黄斑区大致正常。



左眼视网膜水肿，结构紊乱。

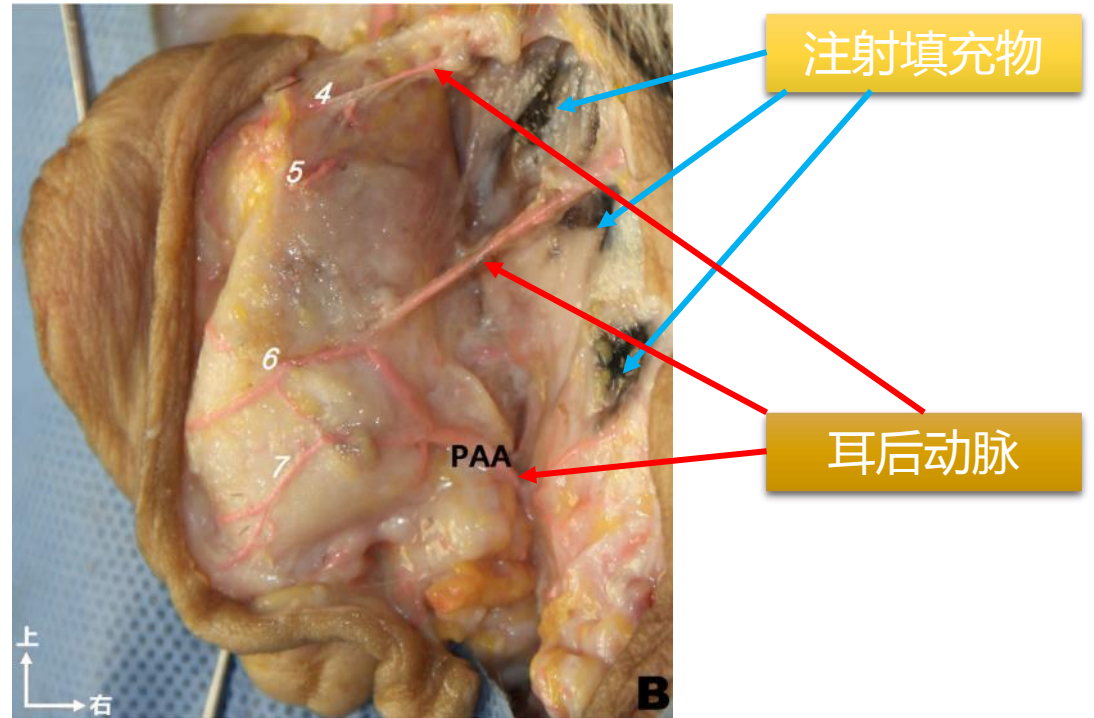
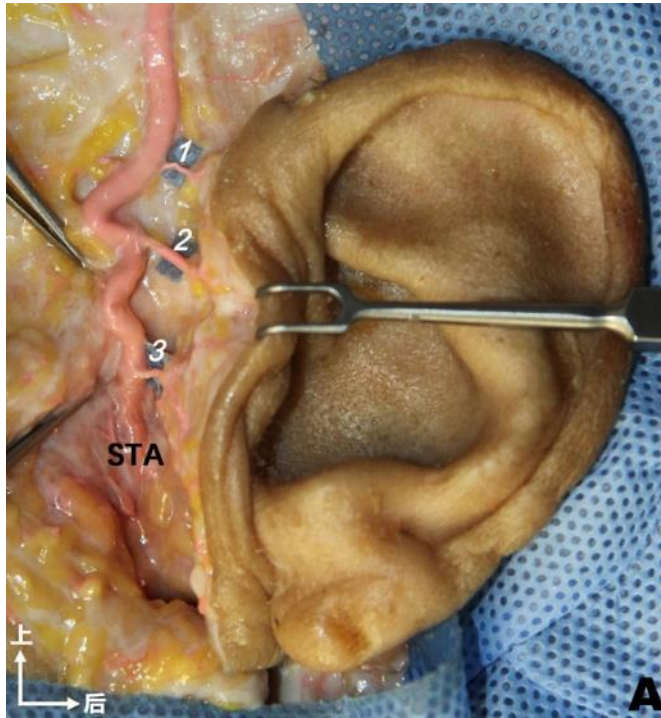
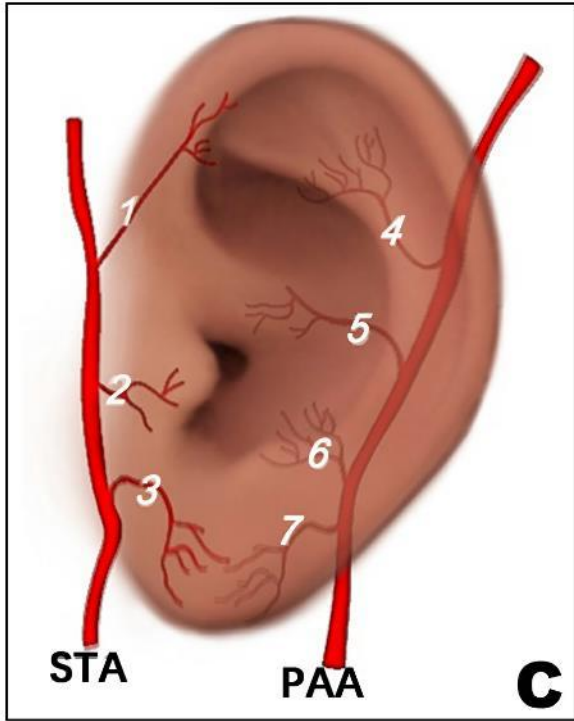
# 耳部注射导致的血管栓塞



(耳后动脉栓塞) 溶酶+扩血管治疗后

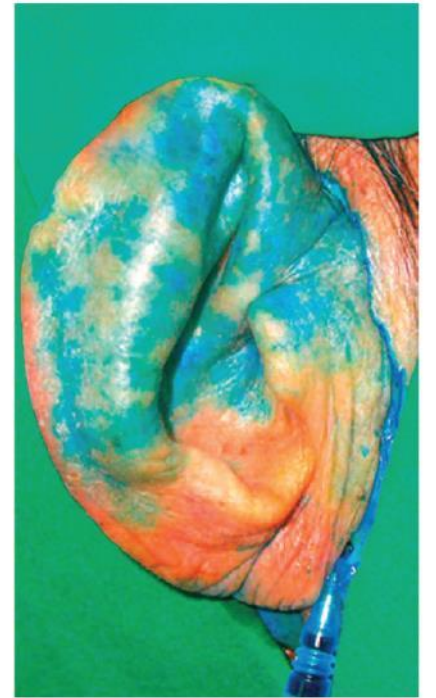
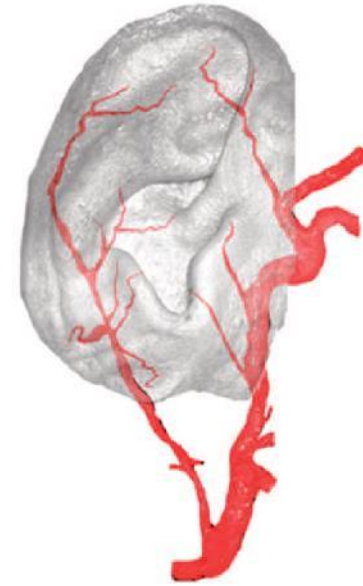
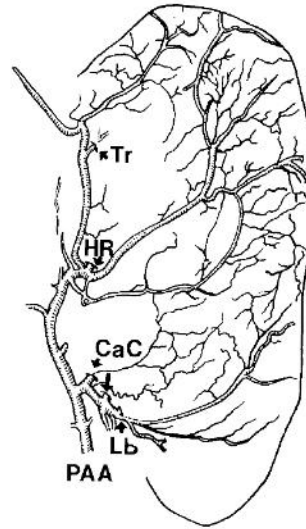
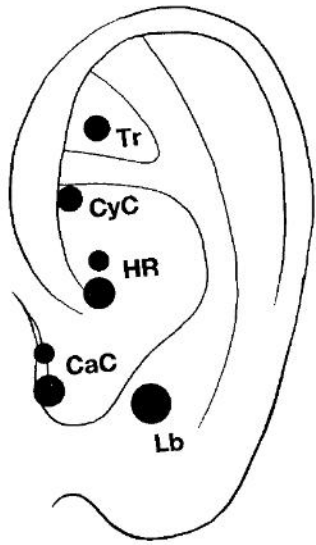


# 颞浅动脉和耳后动脉



A: 颞浅静脉 (STA) 从耳屏前上行, 在上行过程中, 发出了3支进入耳郭的分支 (1、2、3), 它们的外径较细, 目测大约0.2-0.5mm。B: 背侧有4条细小的动脉 (4、5、6、7) 发自耳后动脉 (PAA), 并行走在耳郭软骨的表面。C: 耳郭的动脉血供示意图, 其血供是依赖颞浅动脉的耳前上支 (1)、耳前中支 (2)、耳前下支 (3), 耳后动脉的耳后上支 (4, 5)、耳后中支 (6)、耳后下支 (7), 它们构成血管网, 分别营养耳郭前部和耳郭后部。

# 耳后动脉和颞浅动脉的交通支

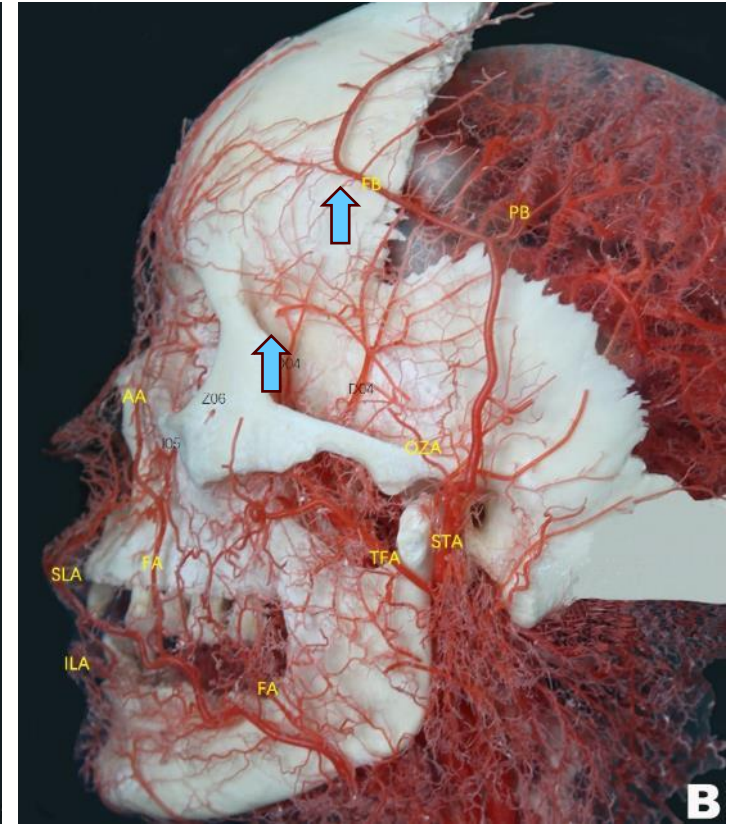
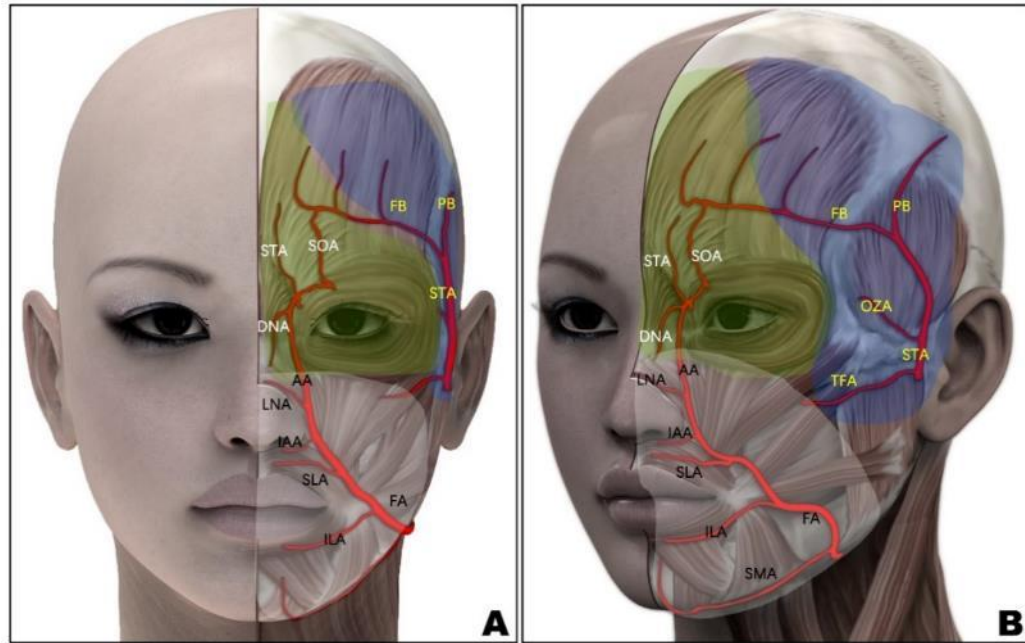


Arterial supply of the anterior ear. Park C, et al. Plast Reconstr Surg. 1992. PMID: 1615090

Anatomical and technical aspects of harvesting the auricle as a neurovascular facial subunit transplant in humans. Ulusal BG, et al. Plast Reconstr Surg. 2007.

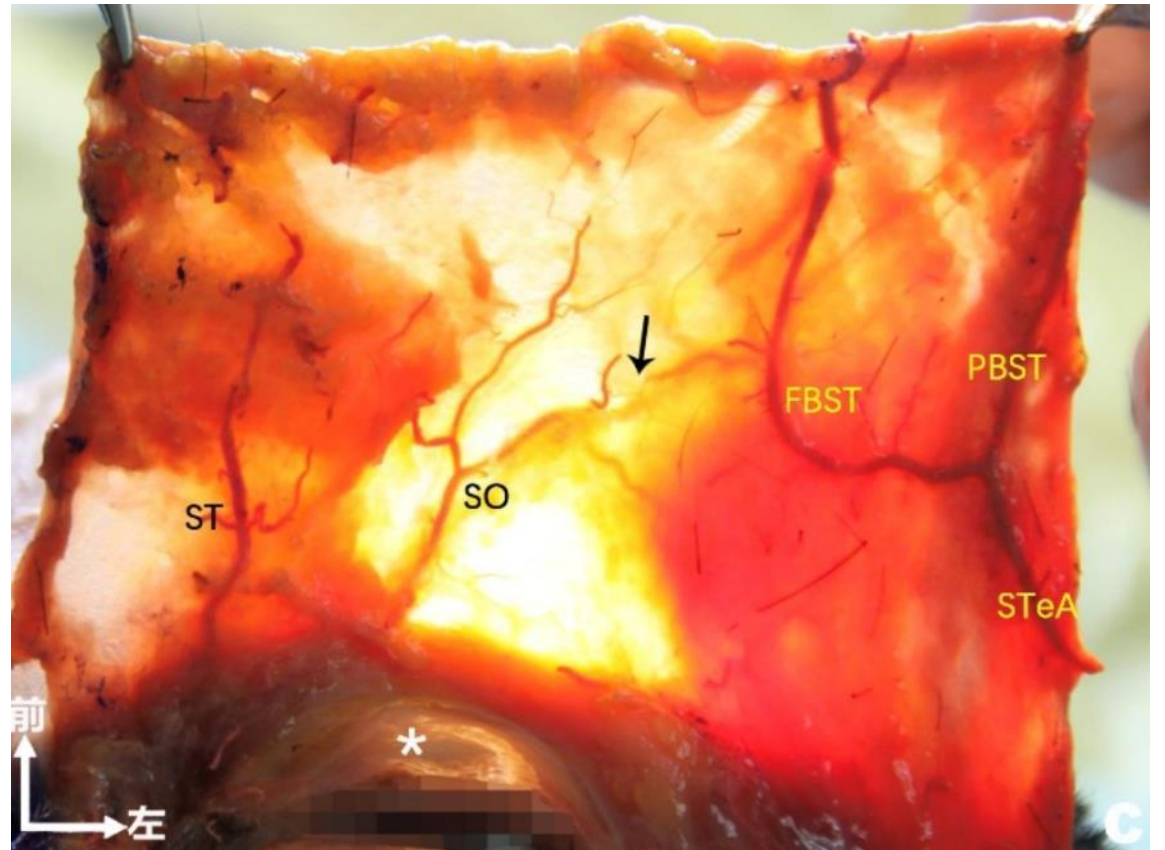
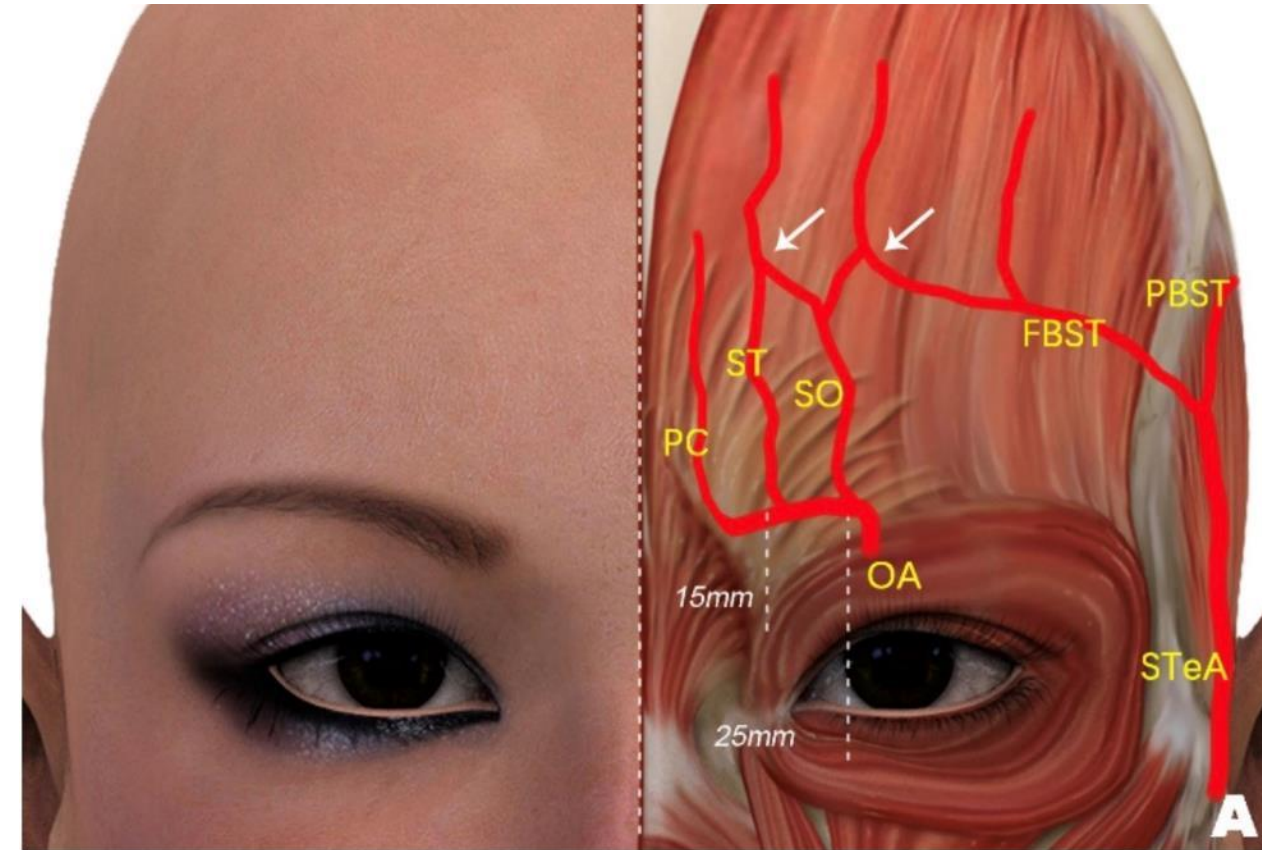
耳后动脉穿过耳软骨的位置—恰好是注射进针的位置

# 颞浅动脉和眼动脉的交通支

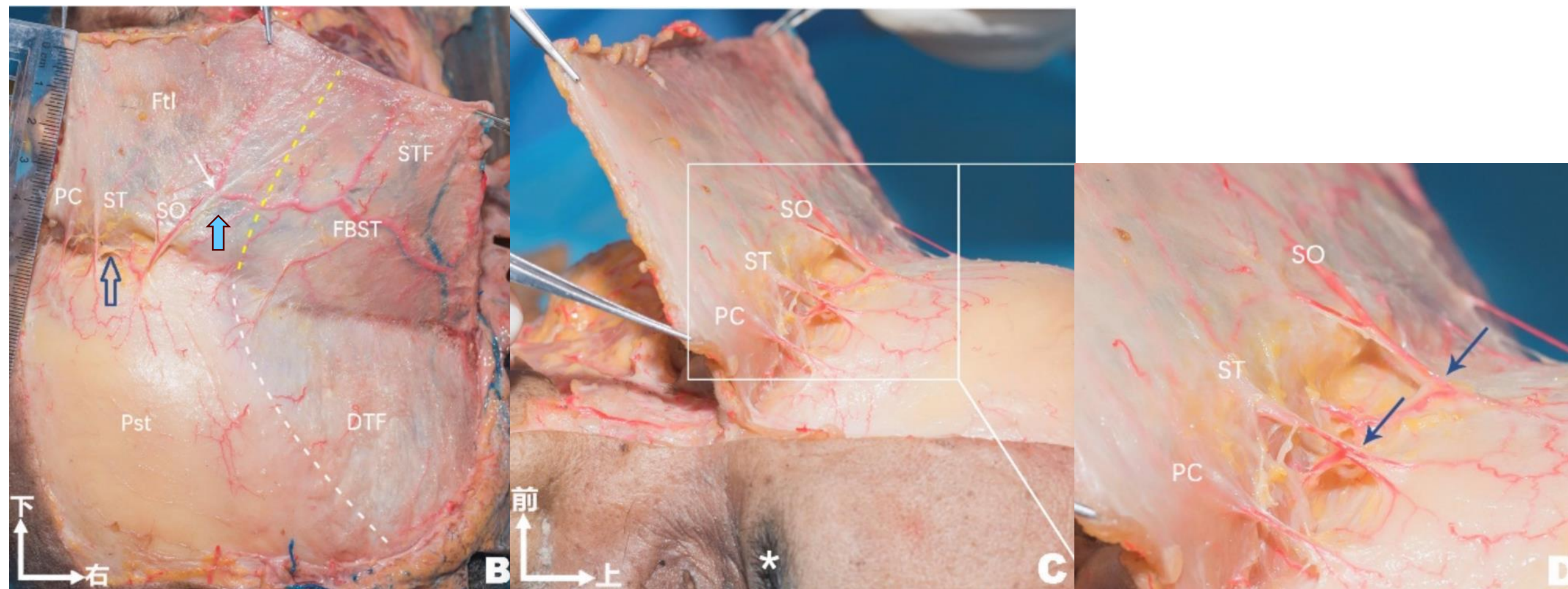


三大动脉系统供血范围示意图。A：面动脉（白色区域）、眼动脉（绿色区域）、颞浅动脉（蓝色区域）的供血范围正面图；B：面动脉（白色区域）、眼动脉（绿色区域）、颞浅动脉（蓝色区域）的供血范围斜面图。从图上可见，面动脉主要供应面颊部和口鼻部，眼动脉主要供应鼻根和眶周，颞浅动脉主要供应颞区、颧弓区和额部外侧。FA：面动脉；SMA：颞下动脉；ILA：下唇动脉；SLA：上唇动脉；IAA：鼻翼下动脉；LNA：鼻外侧动脉；AA：内眦动脉；DNA：鼻背动脉；STA：滑车上动脉；SOA：眶上动脉；STA：颞浅动脉；TFA：面横动脉；OZA：颧眶动脉；PB：顶支；FB：颞支。

# 颞浅动脉和眼动脉的交通支



# 颞浅动脉和眼动脉之间的交通支



## Monocular Vision Loss After Ear Filler Injection

Chen Dong<sup>1</sup> · Chun-Lin Chen<sup>1</sup> · Hai-Bin Wang<sup>1</sup>



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### Abstract

Ophthalmic artery occlusion caused by facial hyaluronic acid filler injection has always been a rare but devastating complication. With the pursuit of beauty, people have become more interested in ears and hyaluronic acid fillers. Herein, we report the case of a more serious rare complication of ophthalmic artery occlusion caused by ear filler injection. A 45-year-old woman developed vision loss on the left side immediately after receiving cosmetic hyaluronic acid injection in the ear, with only the visual field at the inferior temporal side remaining. She was diagnosed with central retinal artery occlusion in the left eye. After treatment with hyaluronidase injection, dexamethasone, hyperbaric oxygen, and oral alprostadil, blood flow was partially restored in the left ophthalmic artery, and her vision improved. Vascular complications after ear injections are rare. However, as the demand for ear filler injections increases, the probability of serious vascular complications is predicted to increase. The potential mechanism by which occlusion occurred involved the filler reaching the superficial temporal artery system through the superior auricular artery, thus occluding the ophthalmic artery. Having an understanding of anatomy is an important measure to avoid complications.

*Level of Evidence IV* This journal requires that authors assign a level of evidence to each article. For a full description of these evidence-based medicine ratings, please refer to the Table of contents or the online Instructions to Authors [www.springer.com/00266](http://www.springer.com/00266).

**Keywords** Lying ear · Ophthalmic artery occlusion · Filler injections · Hyaluronic acid

Dear editors,

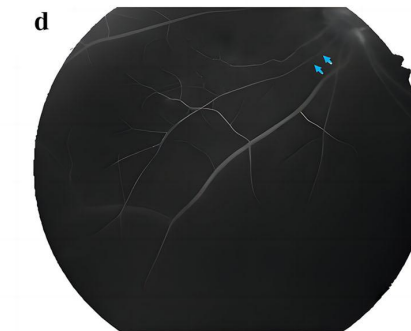
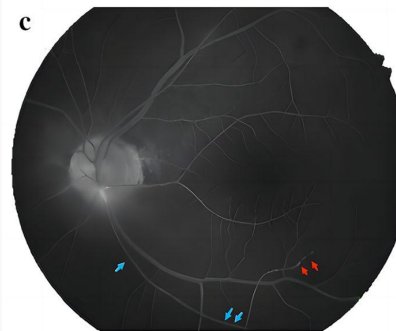
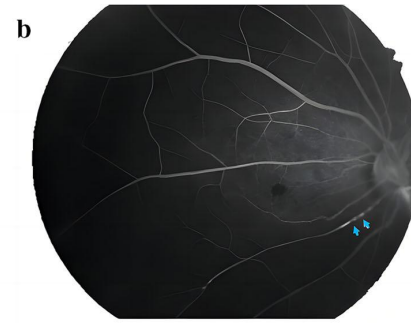
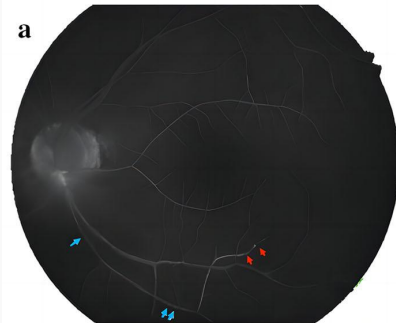
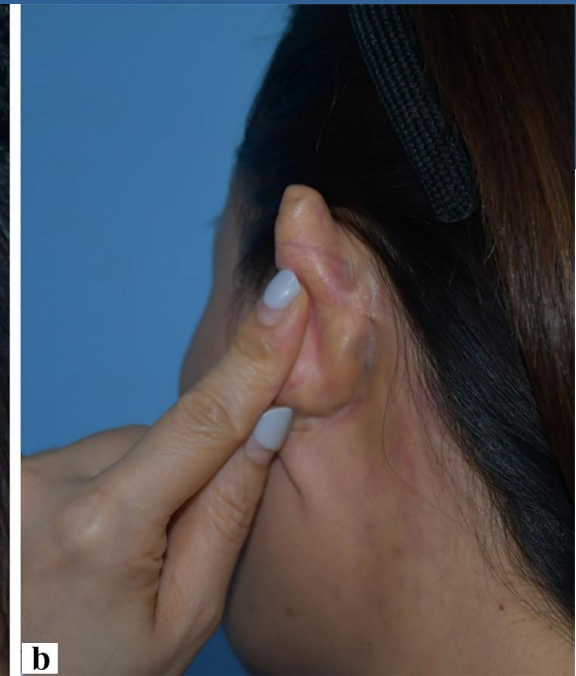
We report the case of a more serious rare complication of ophthalmic artery (OA) occlusion caused by ear filler injection and describe the evolution and possible cause of this case.

At a private hospital, a 45-year-old woman received an injection to correct lying ear. A sharp needle was used to inject 3 ml of hyaluronic acid (HA) filler from the auricle cavity in front of the auricle to the anterior surface of the mastoid periosteum deep in the left auriculocephalic angle. Visual impairment in the left eye immediately occurred. Only vision at the lower temporal side remained; there was no pain and no occlusion disorder, the pupils were equal in size, and the light reflex was blunt. Neurological examination showed no abnormality. Then, the hyaluronidase was promptly injected by the operating physician into the retrobulbar area of the left eye socket and the left ear, followed by the administration of vasodilators, corticosteroids, and eye massage. The patient was referred to an ophthalmologist after no alleviation. The results of a visual acuity test indicated that light localization of the front of the left eye and the nasal side was not accurate; the remaining directions were roughly correct. The ophthalmologist performed an anterior chamber puncture to reduce

Chen Dong and Chun-Lin Chen Contributed equally to the article and named as co-first authors.

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已有“精灵耳”  
 注射导致失明  
 的相关报道发  
 表于国外杂志，  
 须引起重视！

## Clinical Picture

### Embolic central retinal artery occlusion after subcutaneous auricular steroid injection

Sai H Chavala, Jennifer F Wilkinson, Eric A Postal

A healthy 12-year-old boy had a subcutaneous triamcinolone acetonide steroid injection at the site of a keloid on his left earlobe in November, 2008, at a plastic surgery clinic. Within 5 min, he developed left-sided facial numbness, diaphoresis, dizziness, hypaesthesia of the left side of the mouth and tongue, left upper lid ptosis, and nearly complete vision loss in his left eye. Several hours later his systemic symptoms had resolved, he had regained partial vision in his left eye, and his right eye was asymptomatic. On examination by a retina specialist he was noted to have a visual acuity of 20/400 as well as multiple white steroid emboli in the retinal arteries of his left eye (figure). He also had diffuse retinal whitening in the macula and other regions of the retina consistent with a central retinal artery occlusion (figure). 3 days later, his visual acuity improved to 20/150.

This case represents a vision-threatening and potentially fatal complication of subcutaneous auricular steroid injection. Subcutaneous injections of dermal fillers and corticosteroids are done in many specialties such as dermatology, otolaryngology, plastic surgery, and ophthalmology. Corticosteroid injections in the face, including the orbit, eyelids, nose, oral cavity, and maxilla,

have been reported to cause ocular embolic events such as anterior segment ischaemia, branch and central retinal artery occlusions, and ophthalmic artery occlusions. Due to diffuse anastomoses in the facial arterial system, facial injections can cause retrograde embolisation of the ophthalmic or central retinal arteries. This may cause severe, irreversible vision loss. For all injections within the face, good practice is to aspirate before injection and to inject as slowly as possible in order to limit forces that could propel emboli. Patients with visual problems after steroid injection should have immediate ophthalmological evaluation to allow intervention that might improve visual acuity. In embolic central retinal artery occlusion, ocular massage and reduction of intraocular pressure (by anterior chamber paracentesis and intracocular pressure lowering drugs) might help to mobilise emboli and restore ocular blood flow, although evidence that this could help is scarce.

#### Contributors

EAP cared for the patient and prepared the images. SHC and JFW edited the images and wrote the report. Written consent to publication was obtained.

#### Acknowledgments

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美国，北卡州，眼科医师报道。

2008年，12岁男孩，耳垂疤痕疙瘩，在整形诊所注射激素，注射后5分钟，出现左侧面部麻木、出汗、头晕、左侧嘴唇和舌头感觉迟钝，左侧上睑下垂、左眼几乎失明。几小时后逐渐好转，但左眼还有部分视野消失。眼底检查，视力仅为20/400，视网膜动脉可见多发性白色的激素颗粒栓，3天后视力提升至20/150。

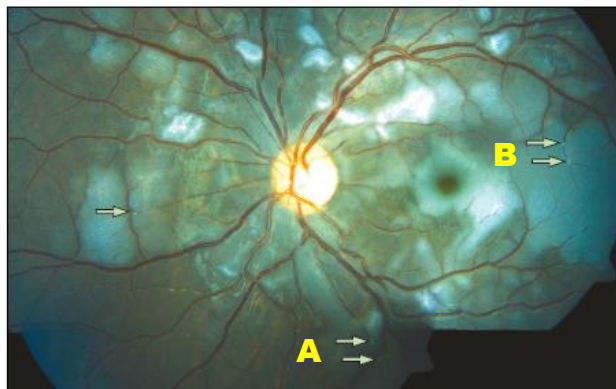
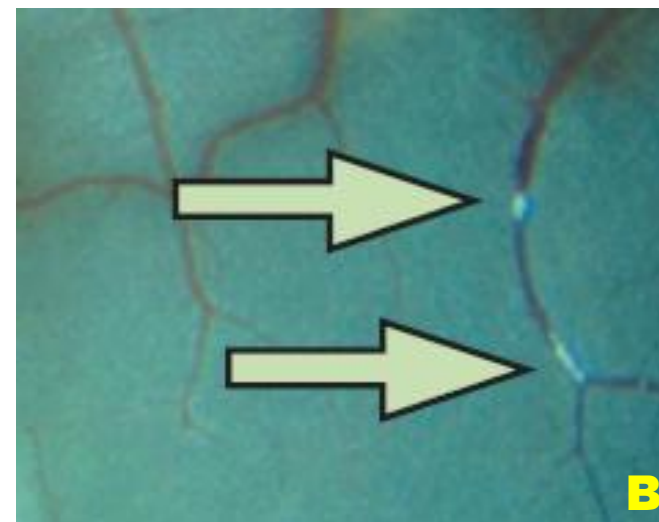
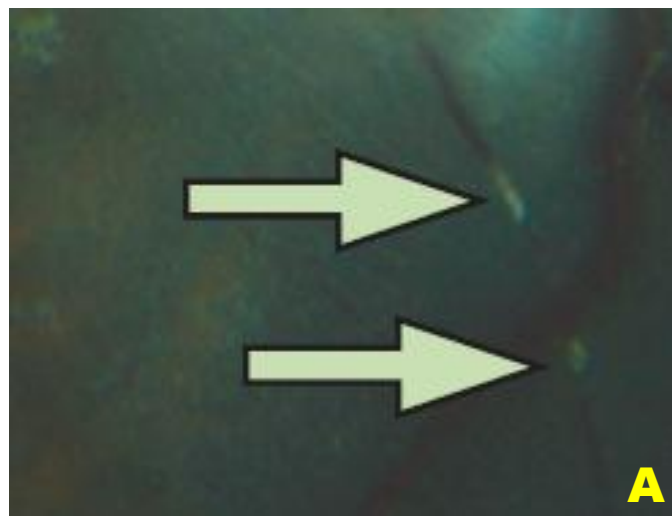


Figure: Embolic central retinal artery occlusion  
Composite colour photograph of the left eye fundus showing disseminated white steroid emboli in the retinal arteries in multiple quadrants (arrows), and diffuse retinal whitening in the macula and other regions of the retina.



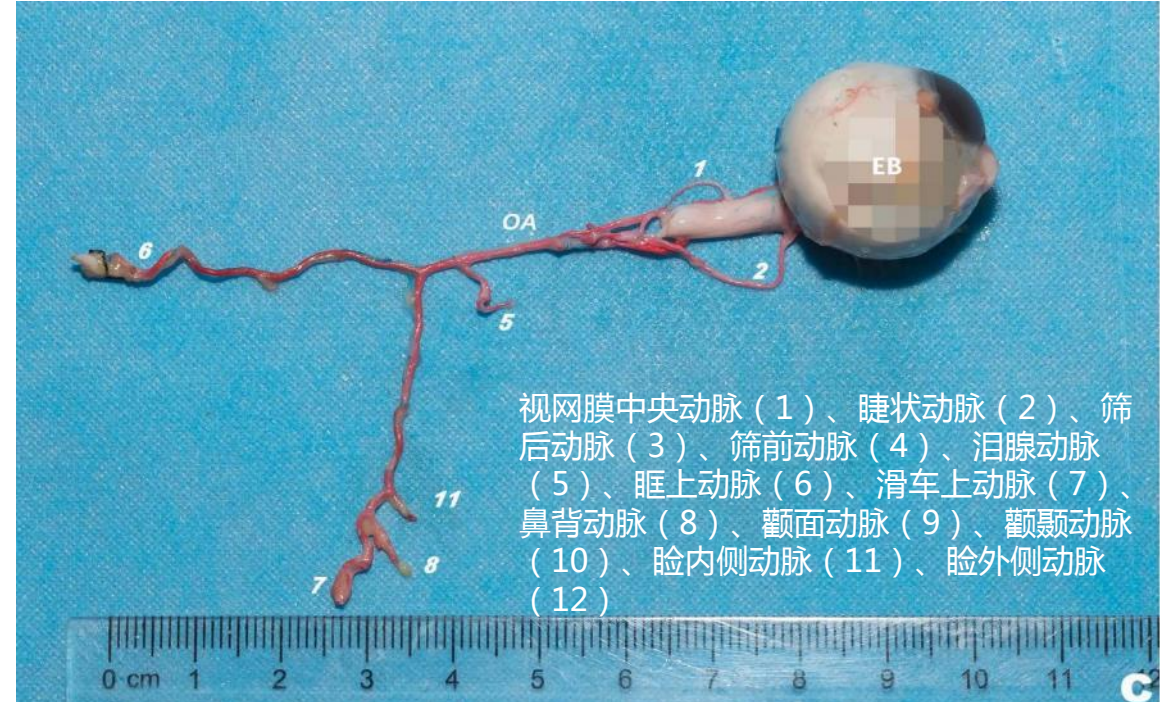
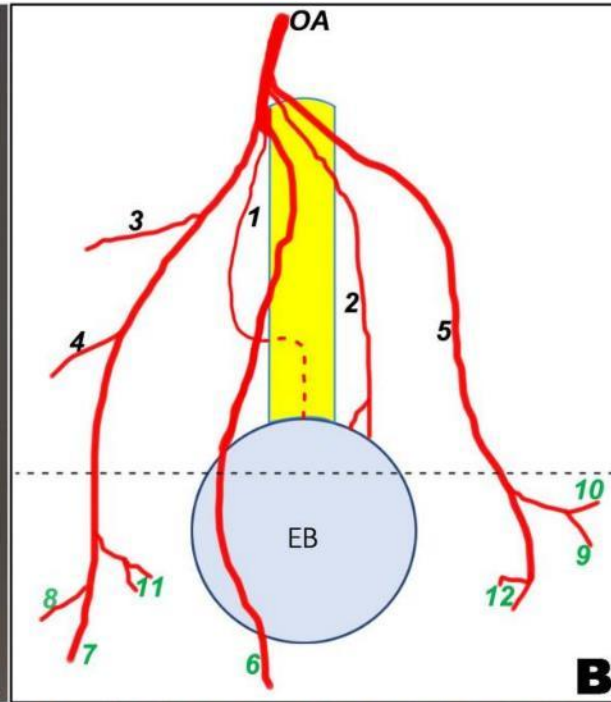
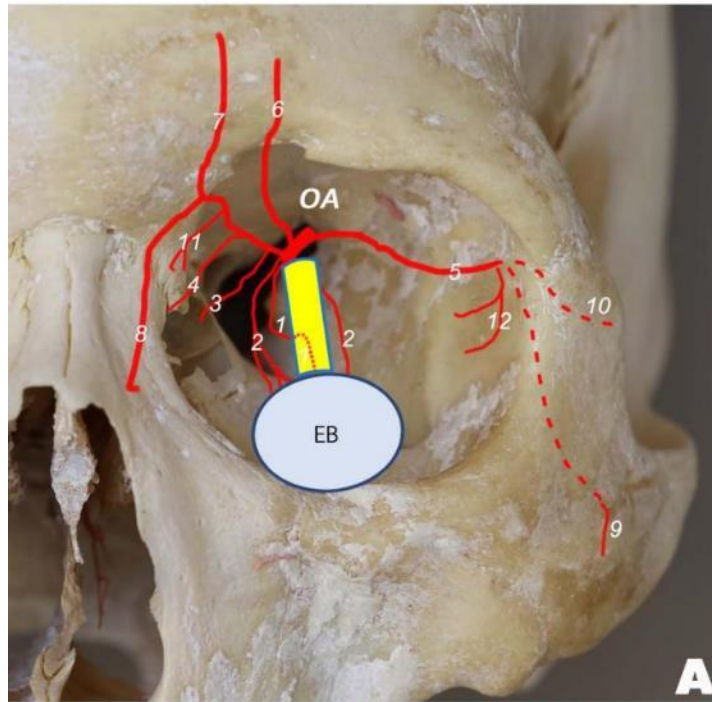
# 眼动脉的分支

## 眶内：

- 筛前动脉、
- 筛后动脉、
- 眼外肌动脉、
- 视网膜中央动脉、
- 睫状动脉、
- 泪腺动脉：颧面动脉、眶颧动脉

## 眶外：

- 眶上动脉 (SOA)、
- 滑车上动脉 (STA)、
- 鼻背动脉 (DNA)、
- 睑内侧动脉 (MPA)

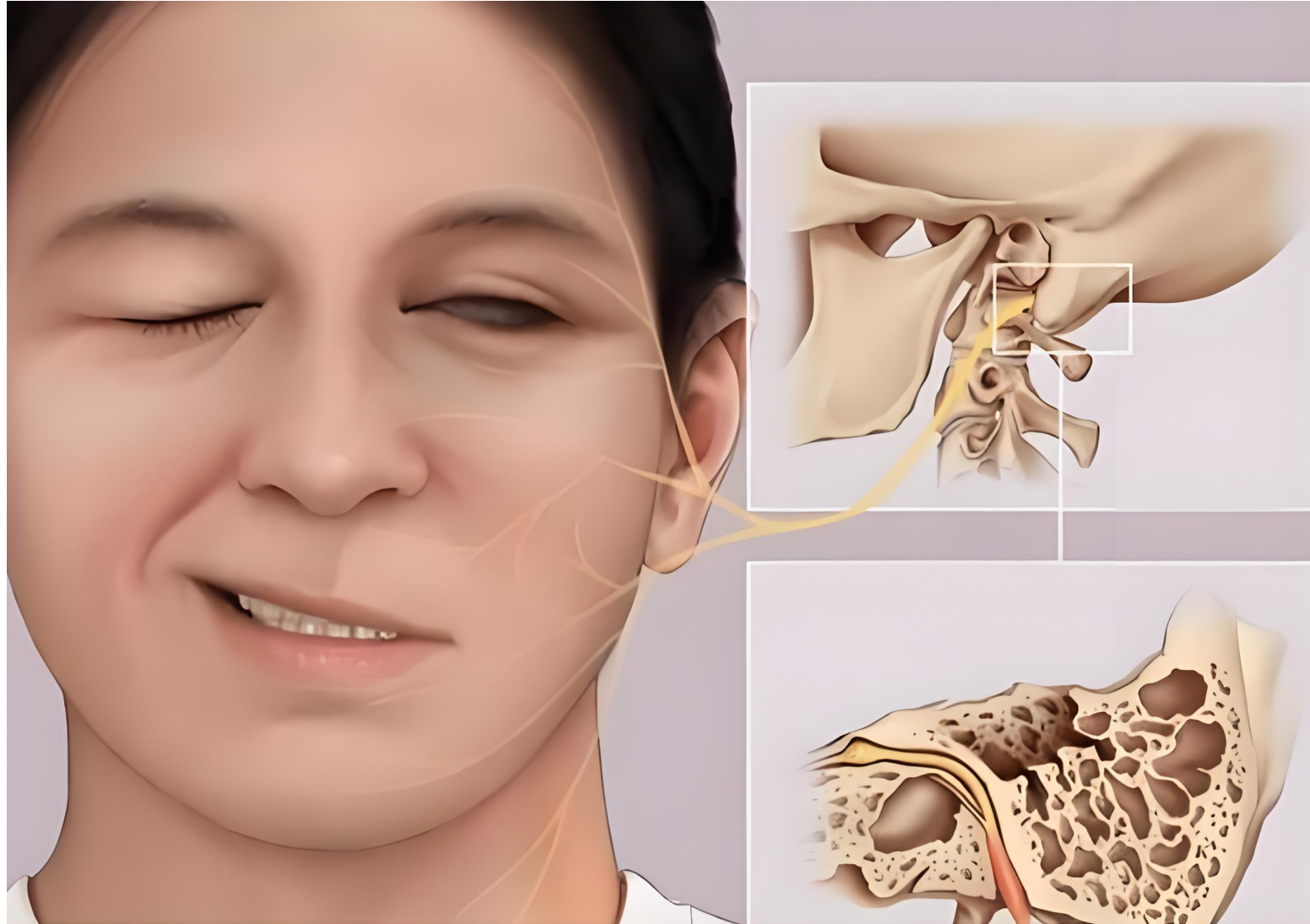




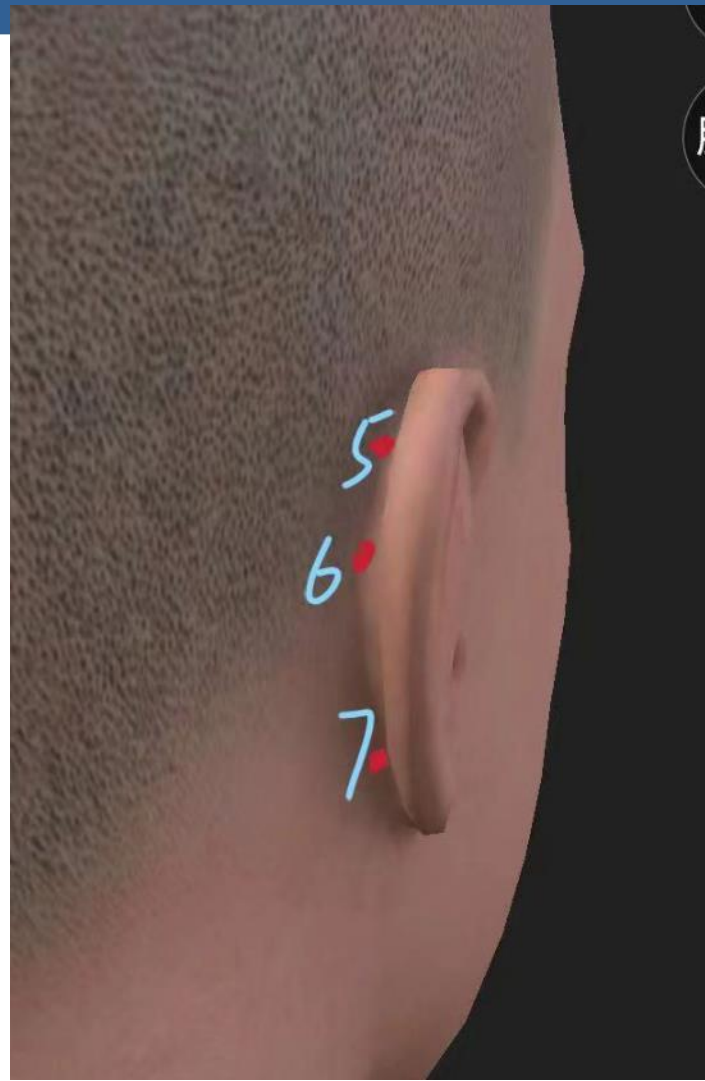


# 神经压迫—面神经

# “精灵耳”注射后面瘫

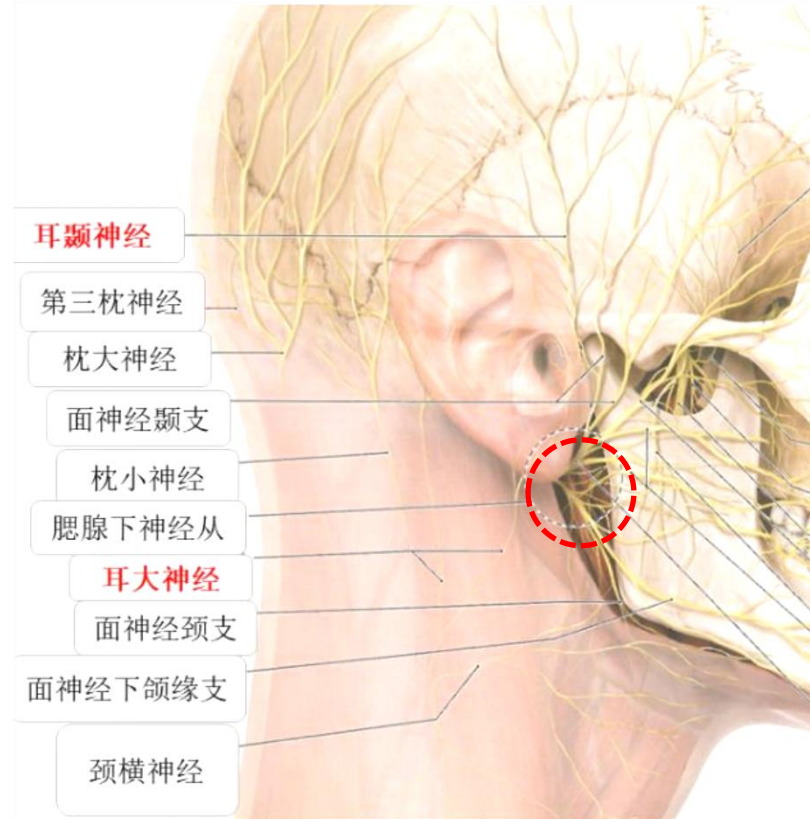
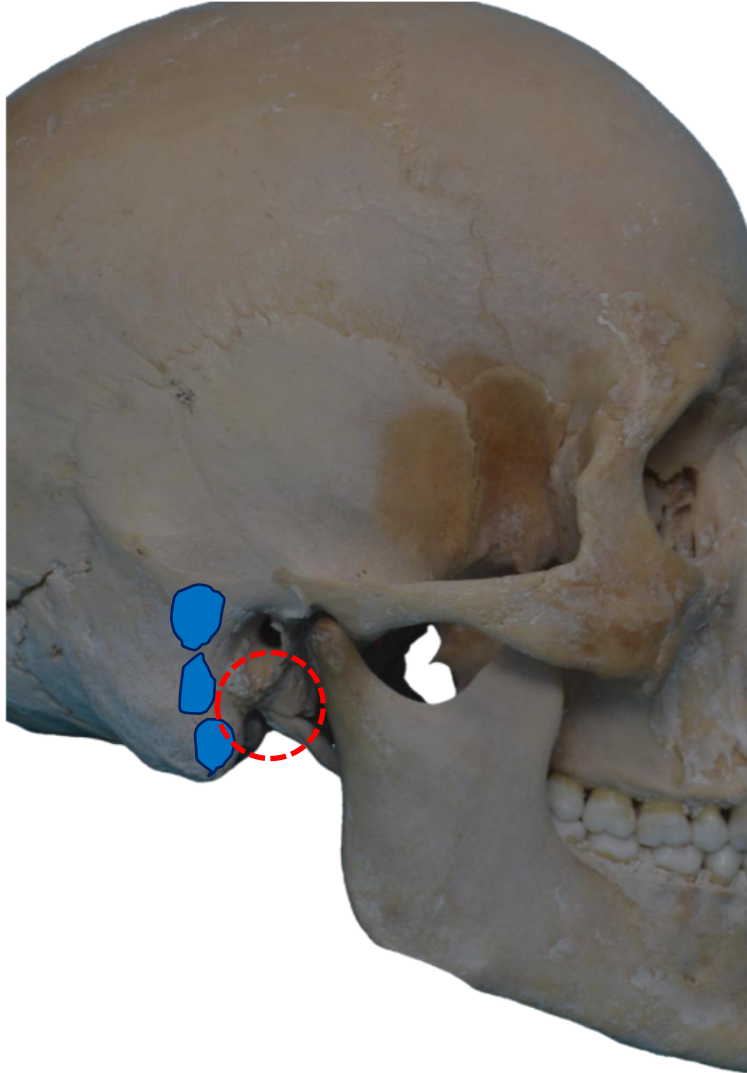


# 耳背面是耳后动脉，耳前面的凹陷区域也是耳后动脉（穿过耳软骨）



注射点总计7点，单点剂量为0.5-1.0ml。

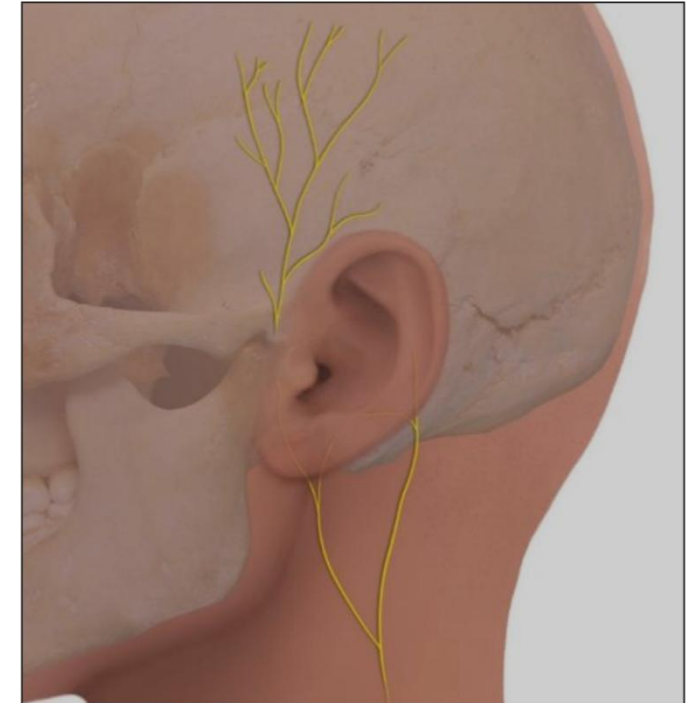
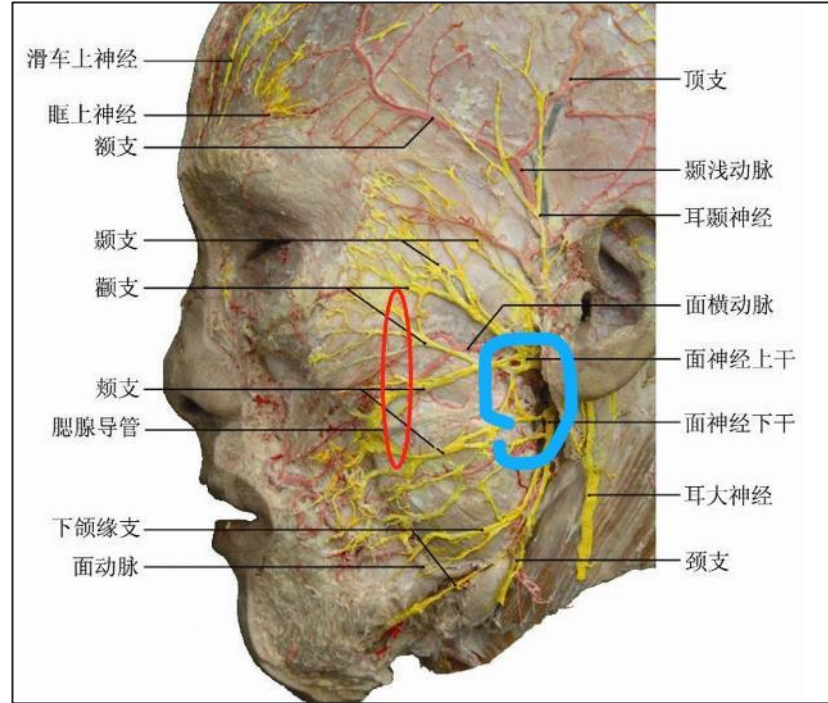
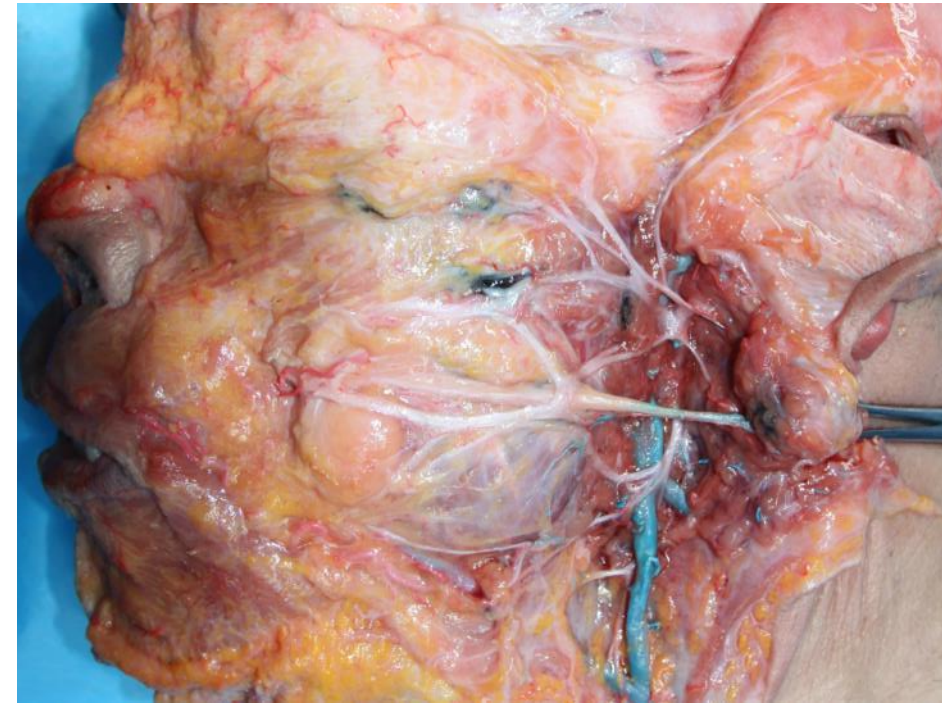
# 而后注射部位和面神经的位置关系



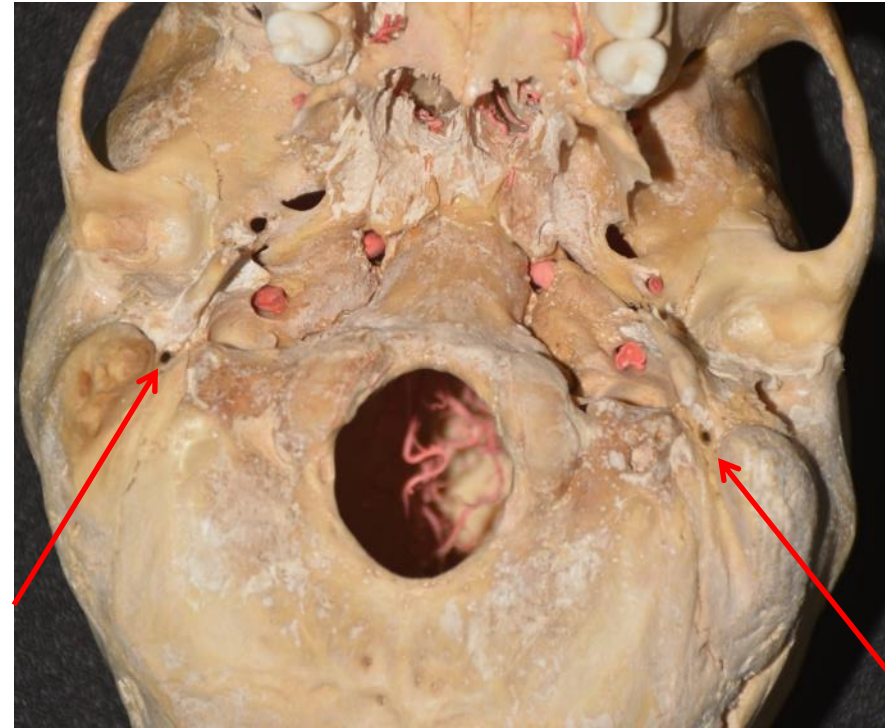
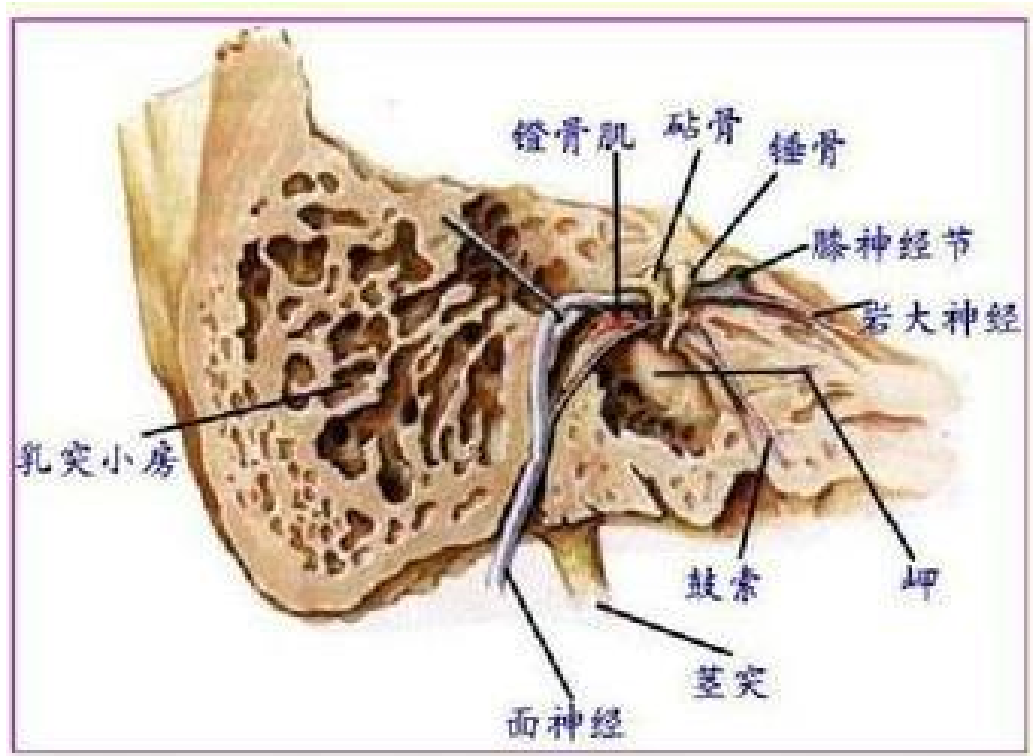
# 耳周的神经

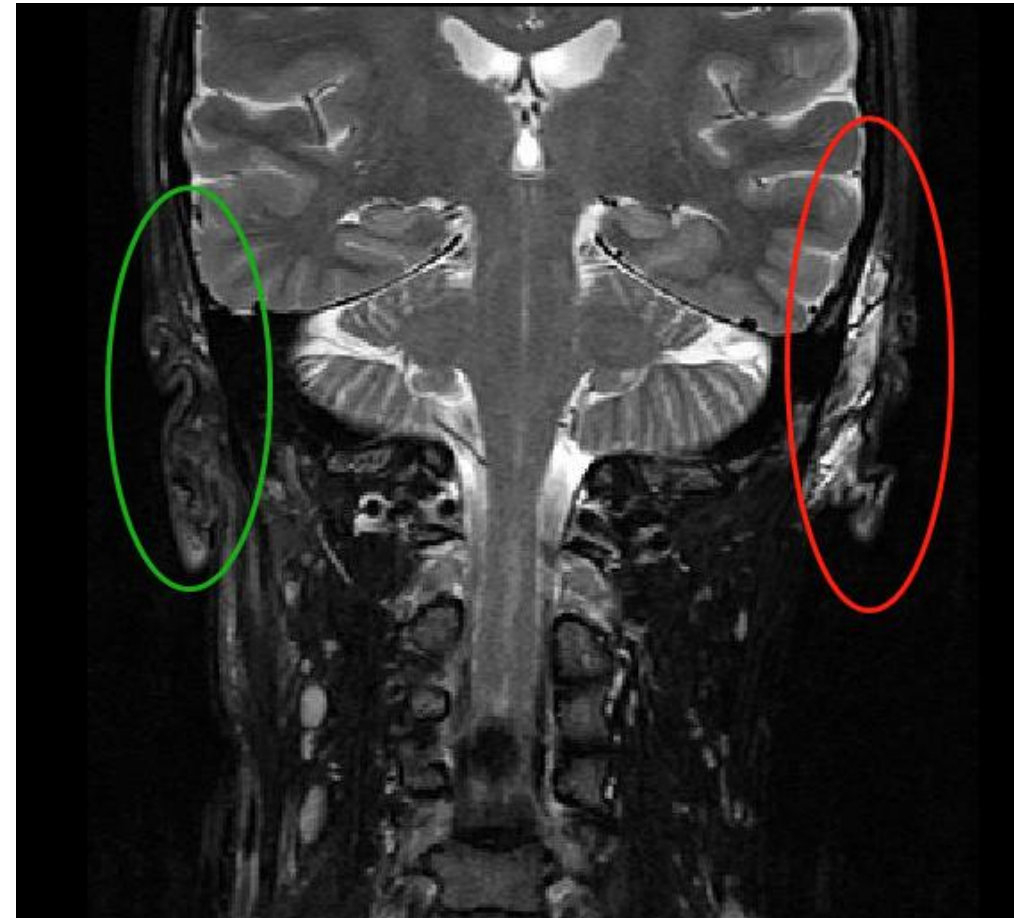
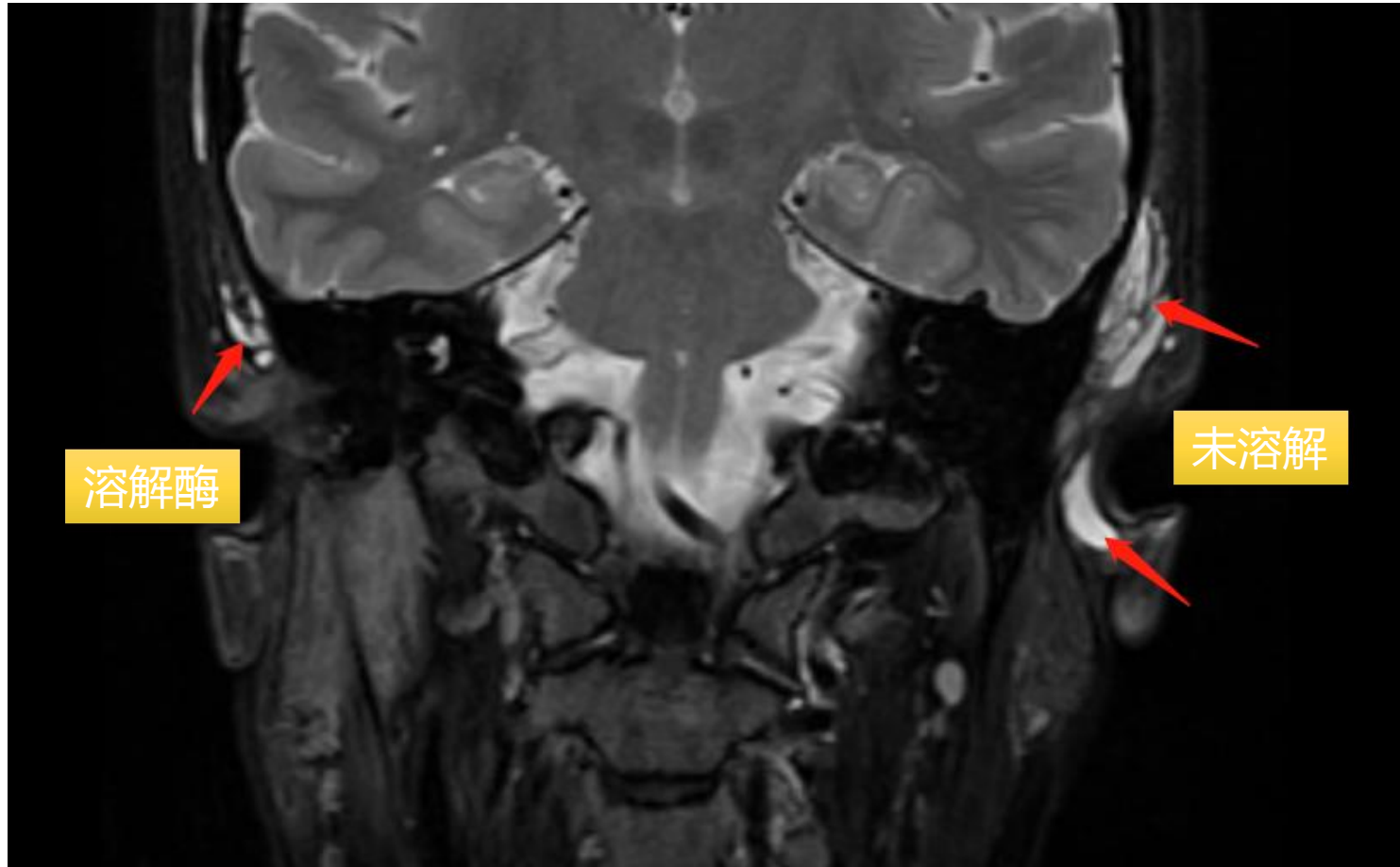
## 面神经

## 耳颞神经、耳大神经

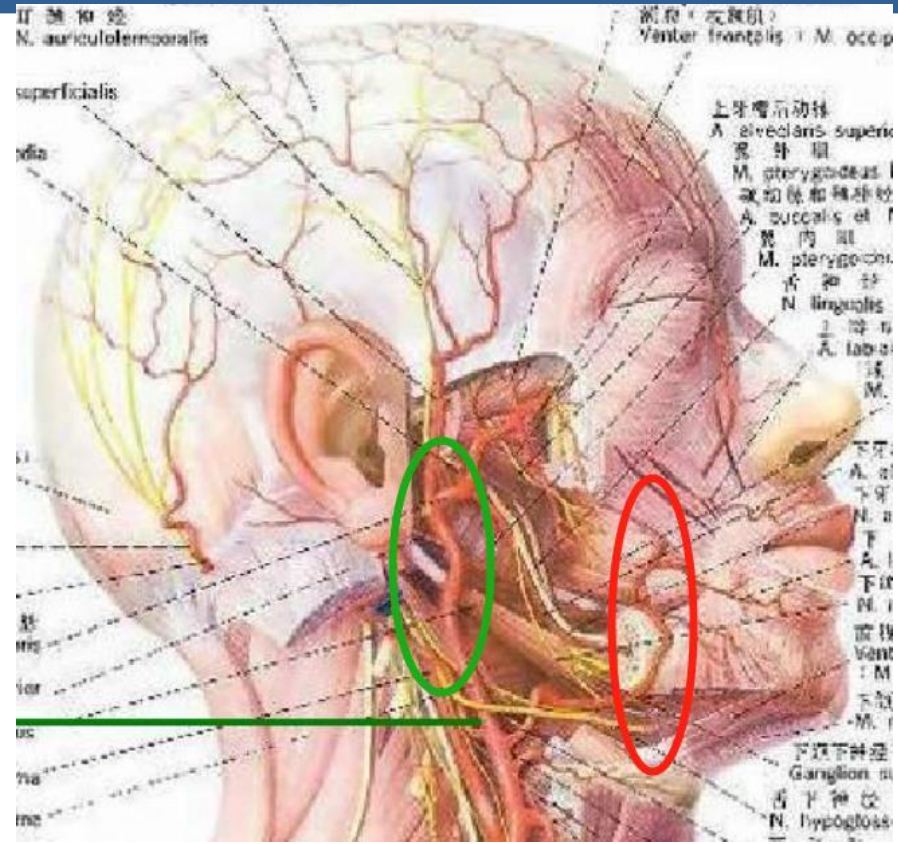
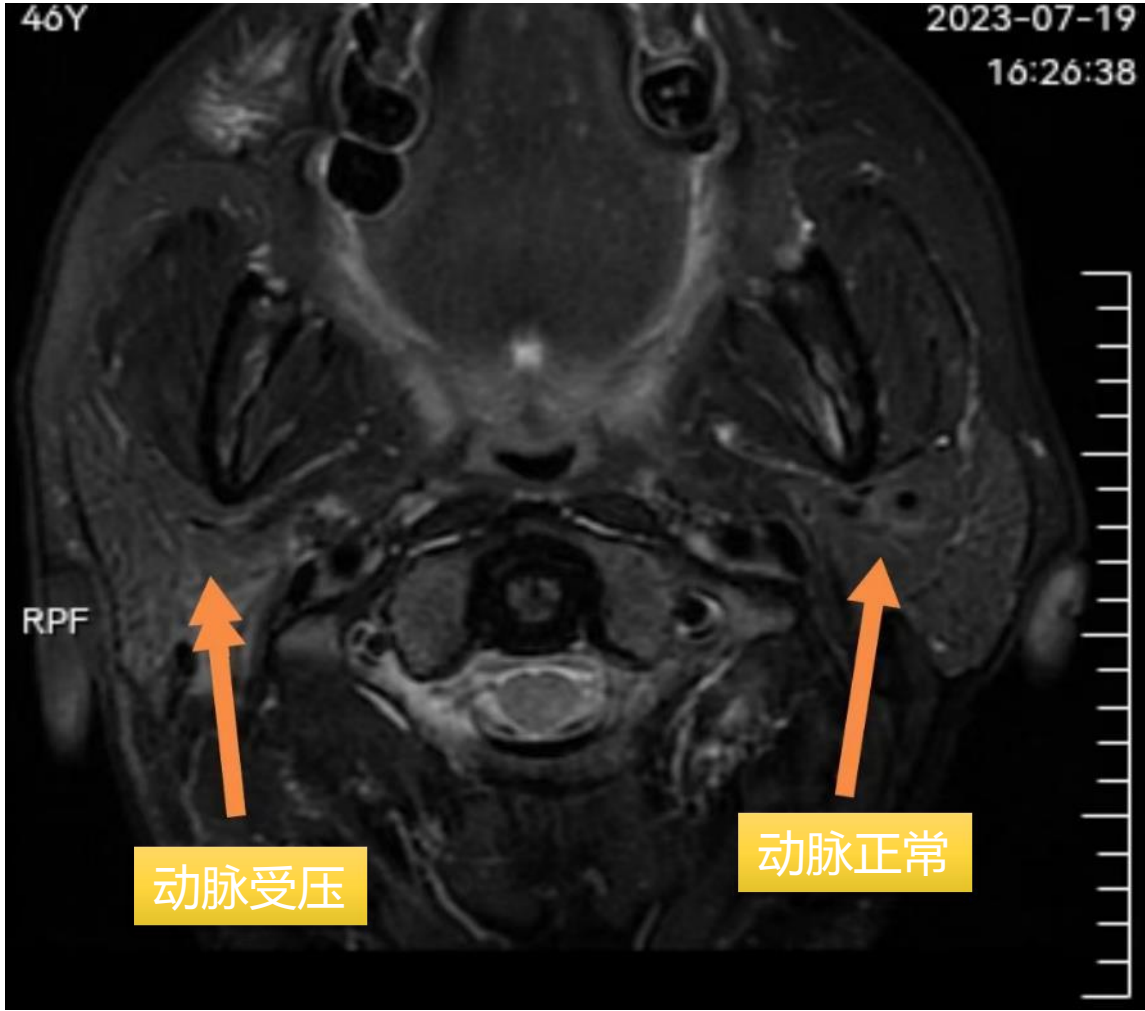


# 面神经出口——茎乳孔





# MRI展示动脉受压



影像学检查：右侧面部动脉（应该是颈外动脉和颞浅动脉的过渡处）受压变狭，可能是填充物渗透到腮腺深叶了。





# 外耳道堵塞—听力障碍

# 注射物移位、外耳道堵塞



右耳



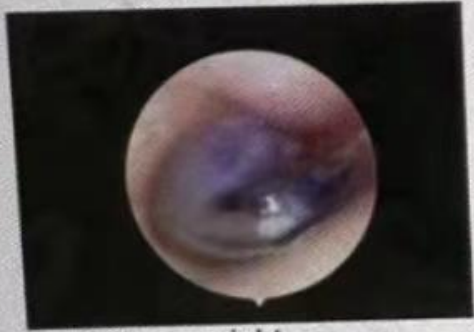
左耳

左侧外耳道后缘可见结节状突起影，大小约0.6X0.2cm，CT值42HU，边界清。

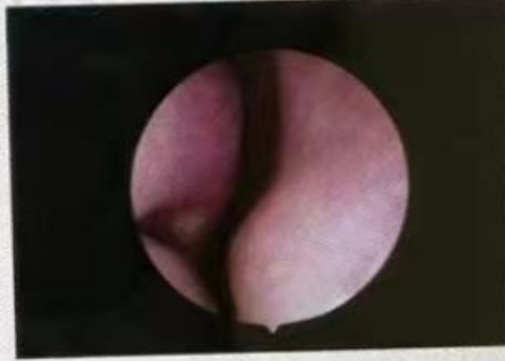
樊星教授提供案例

# 鼓室积血、听力下降

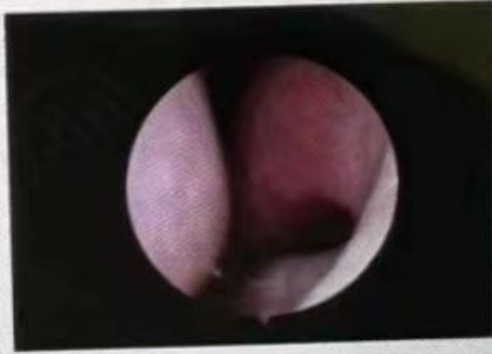
Episode No. : 010P23528503



right



left

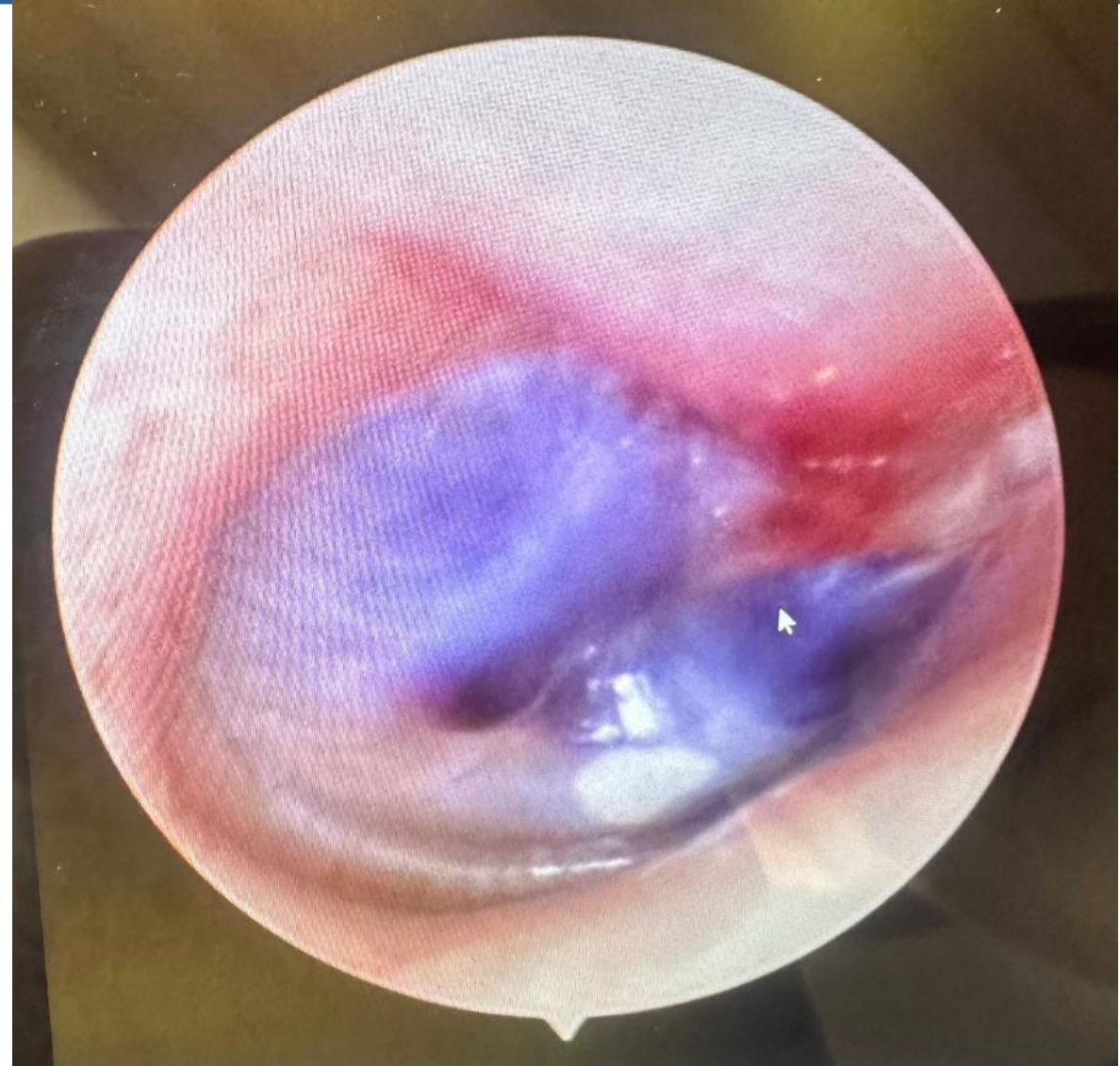


### 内镜所见 Findings:

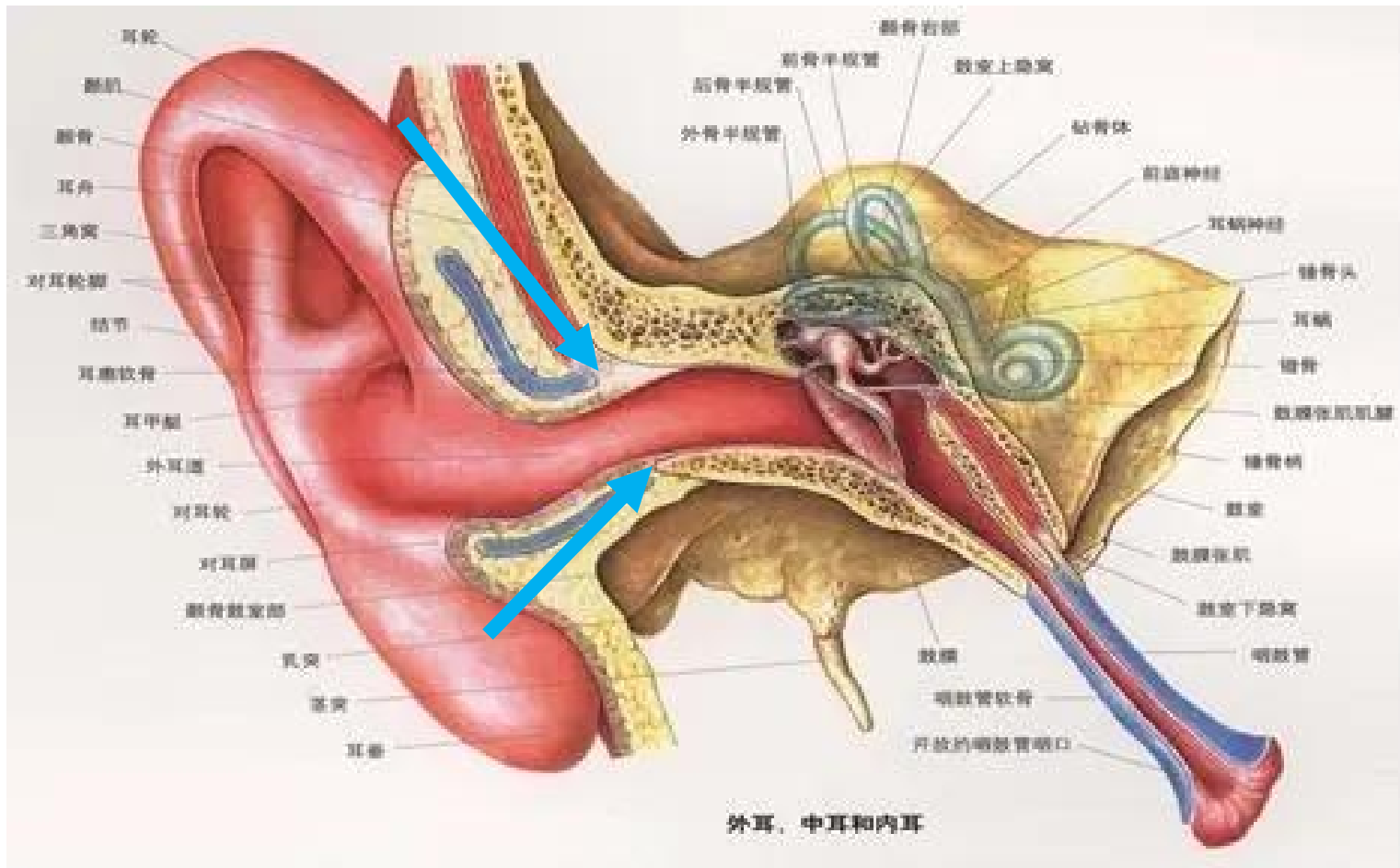
双侧外耳道畅，双侧鼓膜完整，左侧鼓室内标志清，右侧鼓室内积血。  
双侧下鼻甲稍大，鼻道窄。

### 内镜诊断 Diagnosis:

右侧鼓室积血



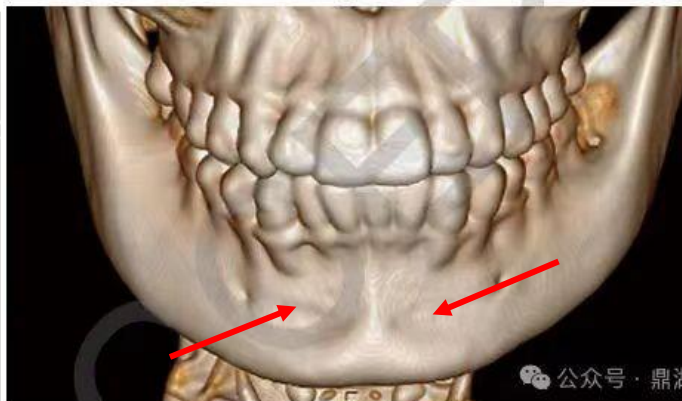
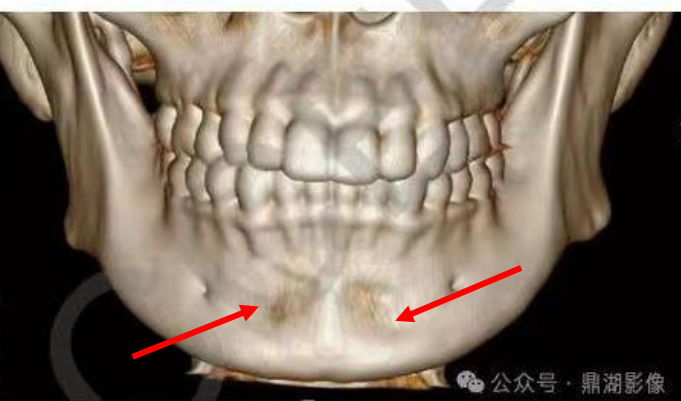
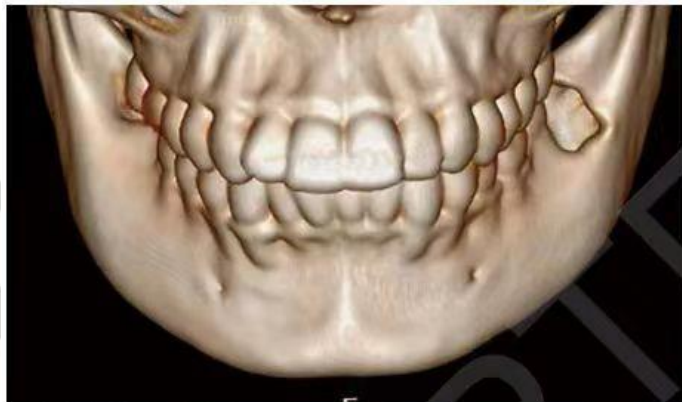
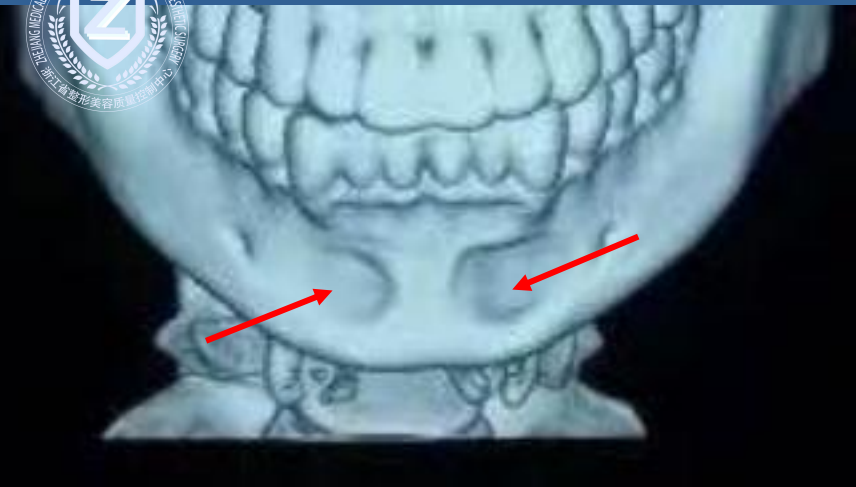
# 注射物也可能进入外耳道



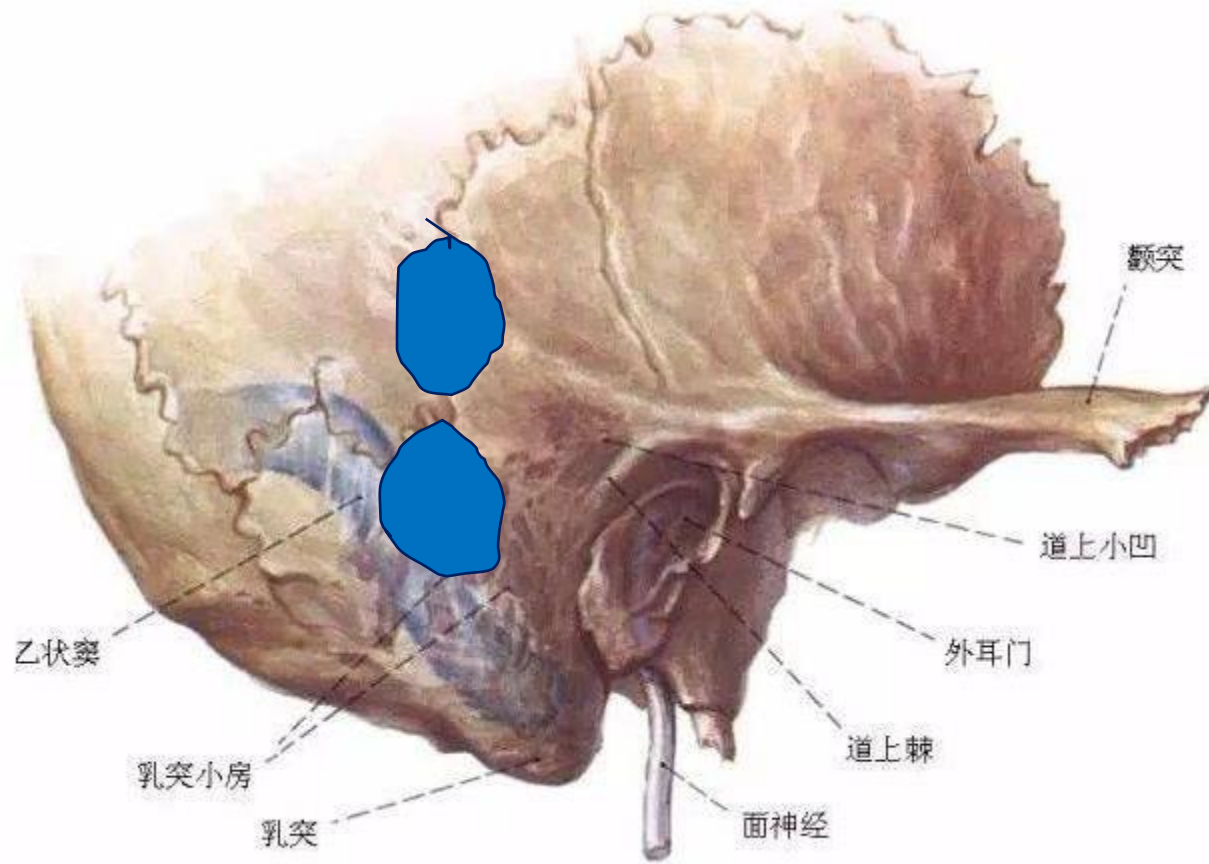


骨吸收—有待观察

# 隆颏后 骨吸收



# 注射物也可能使耳后骨质出现凹陷



the least, set up a system of strict supervision and control.

Currently, in China, the “elf ear” procedure is not accredited by the Chinese Society of Plastic Surgery, nor is it openly taught or discussed at academic plastic surgery conferences. The procedure is not offered in public hospitals in China which decline to carry out procedures that involve an unacceptable level of risk, or which infringe on the principle of nonmaleficence. However, it is increasingly available in private clinics. In a recent article in the New York Post, a surgeon from Guangzhou in southern China stated that he was carrying out up to 6 “elf ear” procedures per day [2].

As responsible public surgeons, we wish to sound the alarm about the “elf ears” procedure which involves potentially serious complications. How many patients currently seeking the “elf ears” procedure will face unpredictable complications in five- or ten-year time?

In 2020, the Chinese National Health Commission issued a circular reminding cosmetic surgery businesses of their duty to respect the law [8]. We call on the National Health Commission and the Chinese Society of Plastic Surgery to either ban the “elf ears” procedure or, at the very least, compel any practitioner who offers it to implement a rigorous and transparent patient informed consent process.

Excessive and inappropriate hype about “elf ears” in the beauty market must be curbed. The public needs to have a rational understanding of the dangers of “elf ears”.

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**Declarations**

**Conflict of interest** The authors declare that they have no conflicts of interest to disclose.

**Ethical Approval** This article does not contain any studies with human participants or animals performed by any of the authors.

**Informed Consent** For this type of study informed consent is not required.

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## 上海九院张茹鸿教授团队论文

### Rationality and Regulation Needed to Contain China’s Dangerous Infatuation with “Elf Ears”

Xia Chen<sup>1</sup> · Ruhong Zhang<sup>1</sup> · Qun Zhang<sup>1</sup> · Zhicheng Xu<sup>1</sup> · Feng Xu<sup>1</sup> · Datao Li<sup>1</sup> · Yiyuan Li<sup>1</sup>



- 呼吁国家卫健委和医师协会，要么禁止“精灵耳”操作，要么至少强制提供操作的从业人员执行严格和透明的患者知情同意程序。
- 必须遏制美容市场对“精灵耳朵”的过度、不当炒作。
- 公众需要对“精灵耳朵”的危害有一个理性的认识。





# 小结

1. 耳部注射增大颅耳角，需要强力支撑，所以，填充注射量较大（单侧耳后注射4-8ml）、局部压力较高、凝胶状的填充物无法固定，容易出现相关的并发症；
2. 血管栓塞：可以导致失明、软组织坏死，颞浅动脉可以和眼动脉相通，耳后动脉主要区域是耳郭背面、耳后头皮及皮肤；
3. 神经压迫：以面神经为主，出现面瘫。
4. 听力障碍：注射物进入外耳道、鼓室，造成外耳道堵塞、鼓室血肿等，影响听力。
5. 骨吸收：还没有临床证据，按照颈部注射后的骨吸收表现推测，耳后注射在持续高压下，也会形成骨吸收。
6. 结论：**应慎重开展此类注射。**



谢谢！