

双语版

中国科学院教材建设专家委员会规划教材

全国高等医学院校规划教材

(供基础、临床、预防、口腔、护理专业用)

ENGLISH-CHINESE  
TEXTBOOK  
OF PATHOLOGY

病 理 学

Chief Editors • Chen Li (陈 莉)



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# 病 理 学

## ( 双 语 版 )

主 编 陈 莉

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北 京

## 内 容 简 介

本书为医学发展的要求,为注重医学生专业基础和能力培养而编写,由陈莉教授主编。内容重点突出病理学在医学教育、医学科学研究及临床医疗工作中的基础理论和成熟的基本技术。本书继承传统病理学体系,精选内容,适当介绍病理学基础与临床诊疗方面的新进展,着重病理与临床实践的联系。各章节均采用中英文对照编写,在每章节后附有中英文词汇对照表,并在各论各章中以附录的形式简要介绍相应的正常组织和细胞的结构和功能,附有典型的病理彩图。这种编写形式,是教学改革中的实践、尝试和创新。便于读者掌握病理知识的同时,熟悉医学专业英语词汇等知识。

本书可供医学院校本科生、研究生及临床各科医师研读。

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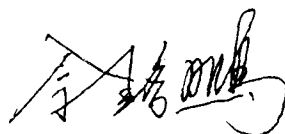
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## 序

今年初夏,陈莉教授告诉我,她正在和多位编委撰写一部用于医学院校本科生病理学的新教科书。全书共 15 章,总论分 5 章,各论分 10 章,每章均为中英文对照。我觉得有创意,但工程不小,难度很大。后来,有机会阅读了其中部分章节,觉得在内容和顺序的安排上和一般有些不同,很有新意。在这本书编委中,青年专家占有很大比例,他/她们过去学习病理学和现在教授病理学,有着丰富的实践经验和切身体会。内容和排列顺序的变动,将会更有利于同学对学习内容的理解和掌握。例如,作者在总论中介绍肿瘤的一般特点和形态后,紧接着介绍了肿瘤细胞的间变,以及不典型增生;在介绍肿瘤的浸润和转移时,先介绍了肿瘤细胞的动力学;此外,还重点介绍了癌基因和抑癌基因,肿瘤的标记物,以及肿瘤的实验室检测指标等,使同学在学习各论以前,对肿瘤从整体上有一比较深刻的概念。本书每章节后均附有较详细的中英文词汇对照表,便于查阅和阅读每章的英文文本,使同学既掌握了病理知识,也可逐步熟悉和掌握医学专业英语词汇,提高阅读英语专业资料的水平,便于今后接轨。在教学中有其独创性,也表达了作者们的丰富经验和良苦用心。

我认为这本新教科书来之不易,是一新的尝试,也是病理教改中的一个组成部分,在今后的实践中她的内容也会不断得到充实和发展。我相信,作为一部教科书和病理学参考书,她一定会使读者受益良多并取得成功。



中国协和医科大学基础医学院  
中国医学科学院基础医学研究所

2004 年 9 月

## 前 言

病理学作为一门极其重要的医学基础学科,涉及临床医学各个专业,为了提高医学基础人才培养的质量与适应临床医学各专业学科发展的需要,我们在进行病理学课程建设与教学改革中,遵循临床医学各专业及本科护理专业的培养目标和要求,纵览国内外多部最新病理学专著和文献,精心选编内容,编写了本书。全书共 15 章,包括总论 5 章,各论 10 章。系统地介绍了病理学的基本理论,较全面地反映了国内外的病理学的最新进展。在编写中,力求理论联系实际,图文并茂。在每章节后均附有中英文词汇对照表,并在各论各章中,以附录的形式简要介绍相应的正常组织和细胞的结构和功能,以利于读者更好的理解和掌握病理知识,熟悉与掌握医学专业英语词汇。对病理学的基础理论、基本知识、基本技能,获得良好的学习和训练。

本书编写过程中,除了得到各位编者的热情支持外,还有吕丽(大连医科大学附属肿瘤医院病理科)、汪怡(上海复旦大学医学院病理学博士)、肖坚(武汉同济医科大学病理学博士)、吴健美(南京医科大学病理学硕士)、丁一林、解晶心、董达科、王艳煜、王艳芬(南通医学院病理学硕士)等,为本书的完成做了大量的工作,科学出版社编辑也为本书的出版给予了极大的帮助,在此特致以衷心的感谢。本书的出版集中体现了编者们高度的责任感,团结协作和精益求精的精神及敬业忘我的工作热情。

在编写过程中,虽然编者尽了最大的努力,但对编写中英文双语教材还没有经验,书中还有不足之处,甚至错误,希望读者批评指正。

陈 莉

2004 年夏



图 1-1 萎缩, 慢性肾小球肾炎 (Atrophy, chronic glomerulonephritis)

肾脏缩小, 表面呈弥漫细颗粒状  
The kidney is contracted (atrophy) and has diffusely granular outer surface

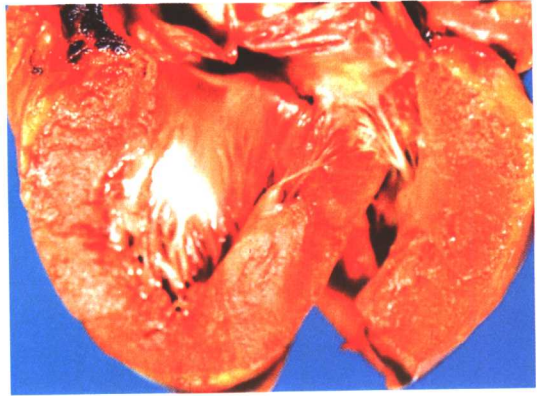


图 1-2 肥大, 心脏 (Hypertrophy, heart)

此例高血压病中, 心肌由于负荷过大而增厚  
The myocardium is thickened due to overwork in a case of hypertension

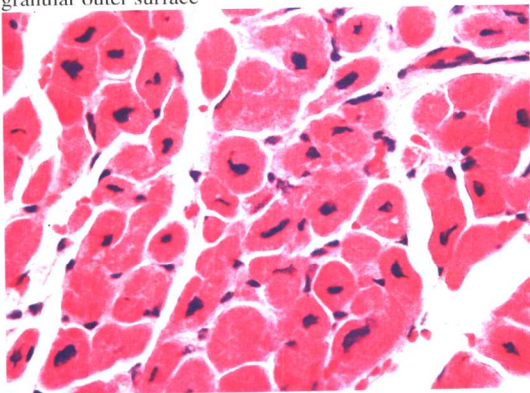


图 1-3 肥大, 心脏 (Hypertrophy, heart)

高血压心脏的心肌细胞胞浆不均匀增多, 核异型  
Increased sarcoplasm and anisocytosis with pleomorphism of nuclei are seen in a hypertensive heart

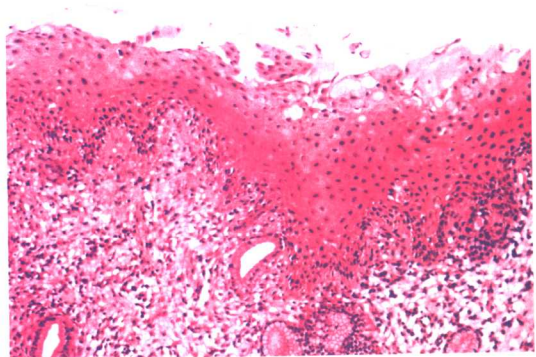


图 1-4 化生, 宫颈 (Metaplasia, uterine cervix)

慢性炎症致宫颈粘膜柱状上皮细胞被鳞状上皮细胞取代  
Endocervical mucosa shows replacement of endocervical columnar cells by squamous cells (metaplasia) with chronic inflammation

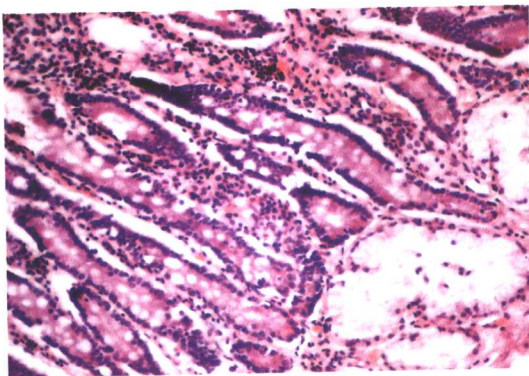


图 1-5 化生, 慢性胃炎 (Metaplasia, chronic gastritis)

胃粘膜肠上皮化生, 可见杯状细胞和浸润的淋巴细胞  
Gastric mucosa shows intestinal metaplasia showing goblet cells and infiltration of lymphocytes

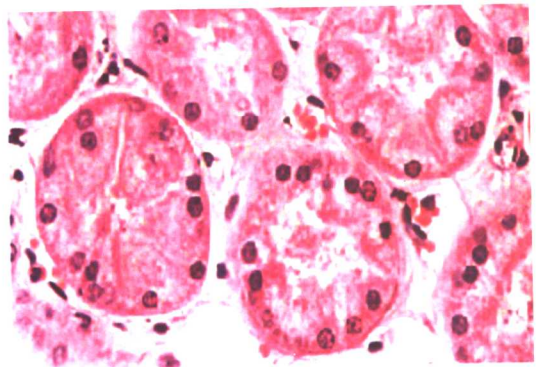


图 1-6 细胞水肿 (Cellular swelling)

近曲小管上皮细胞水肿, 胞浆内有粉红色细小颗粒, 近曲小管管腔变小, 不规则  
Renal tubular cells underwent cellular swelling, cytoplasm contains red granules, and the lumina were diminished and irregular



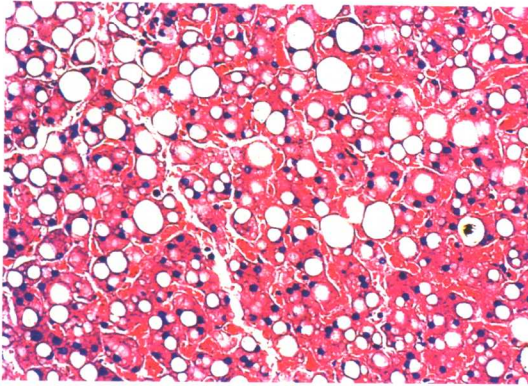


图 1-7 脂肪变性, 肝脏 (Fatty change, liver)  
可见肝细胞核被大空泡取代, 脂肪空泡大小不一, 残余肝细胞受压变形  
Coarse vacuoles are seen displacing the nuclei of the hepatocytes. The fatty vacuoles vary in size and the remaining liver cells are often distorted

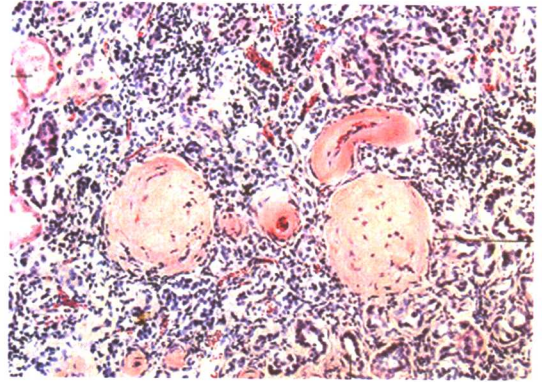


图 1-8 玻璃样变, 肾小球 (Hyaline change, renal glomerulus)  
大多数肾小球完全瘢痕化, 被均质粉染玻璃样物质取代  
Most of the glomeruli are completely scarred and being converted to uniformly pink hyaline masses

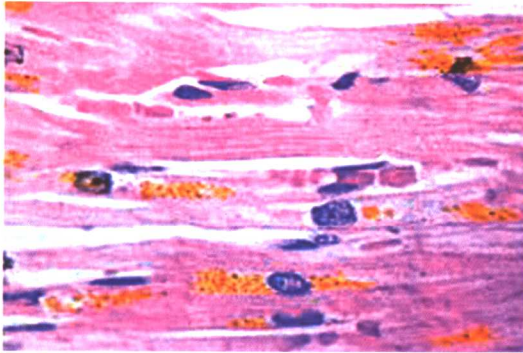


图 1-9 脂褐素, 心脏 (Lipofuscin pigment, heart)  
脂褐素呈棕黄色, 聚集在核周区  
Lipofuscin pigments are yellowish brown and accumulated in perinuclear polar zone

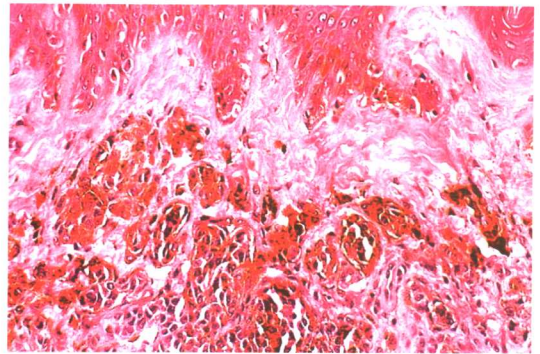


图 1-10 黑色素, 皮肤 (Melanin pigment, skin)  
皮内痣细胞和基底细胞胞浆中可见棕黑色素 (黑色素)  
Intradermal nevus cells and basal cells contain dark brown pigments (melanin pigments) in their cytoplasm

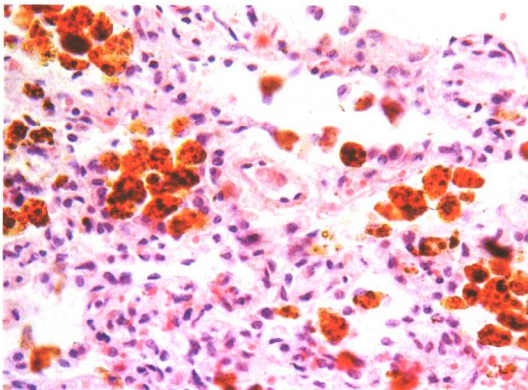


图 1-11 含铁血黄素, 肺 (Hemosiderin pigment, lung)  
含铁血黄素为棕黄色颗粒, 见于慢性肺淤血的巨噬细胞中  
Hemosiderin pigment are golden brown granular and are found in macrophages of the lung in chronic passive congestion

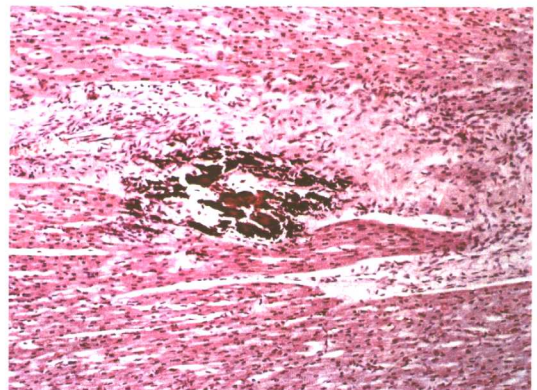


图 1-12 营养不良性钙化, 心脏 (Dystrophic calcification, heart)  
图中央可见心肌被灶状的钙化、纤维化取代  
At the center, myocardium is replaced by focal fibrosis with calcification



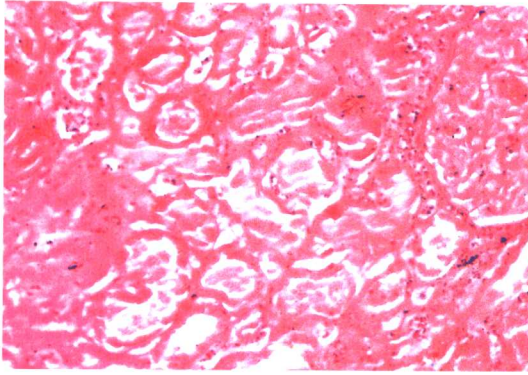


图 1-13 凝固性坏死，肾 (Coagulation necrosis, kidney)  
急性肾梗死中见坏死，但肾小球、肾小管结构尚可辨认  
Acute renal infarction shows necrotic but recognizable glomerous and tubules

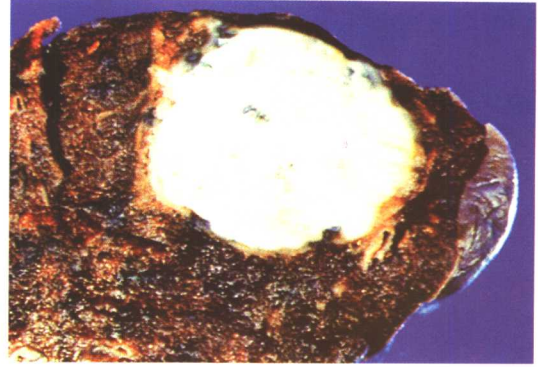


图 1-14 干酪样坏死，肺 (Caseation necrosis, lung)  
肺切面可见白色干酪样坏死，团块与周围肺实质分界清，含炭末色素  
Whitish cheesy necrosis is seen in the cut section of the lung. The mass is well defined from the surrounding lung parenchyma and contains anthracotic pigment in it



图 1-15 干性坏疽，足 (Gangrenous necrosis, foot)  
左足见干性坏疽，颜色变黑。这种坏疽有别于含有大量渗出的湿性坏疽  
The left foot shows dry gangrene and darkish discoloration. This type of gangrene is different from wet gangrene that contains a considerable exudate

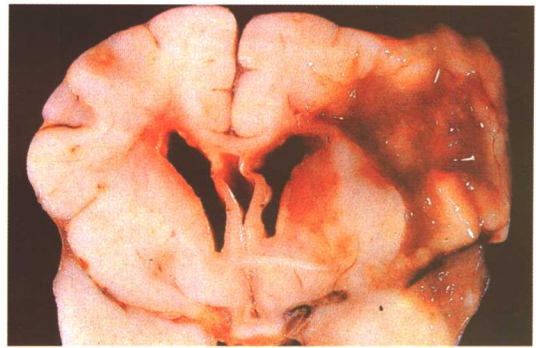


图 1-16 液化性坏死，脑 (Liquefaction necrosis, brain)  
由于化脓性病变，右大脑半球部分发生液化性坏死  
Right cerebral hemisphere is partly undergoing liquefaction due to suppurative process

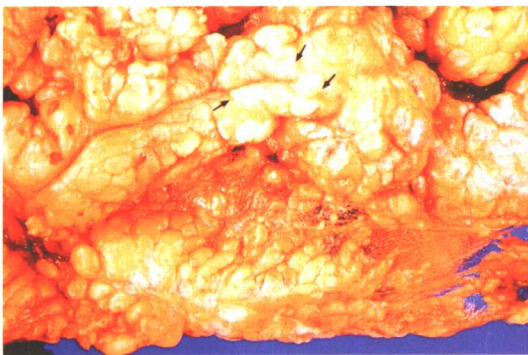


图 1-17 脂肪坏死 (Fat necrosis)  
胰酶渗漏造成脂肪坏死，形成多个白色小坏死灶。该患者为急性胰腺炎  
Multiple small foci of whitish nodules (arrows) are resulted from fat necrosis by the leakage of pancreatic enzyme. This patient had an acute pancreatitis

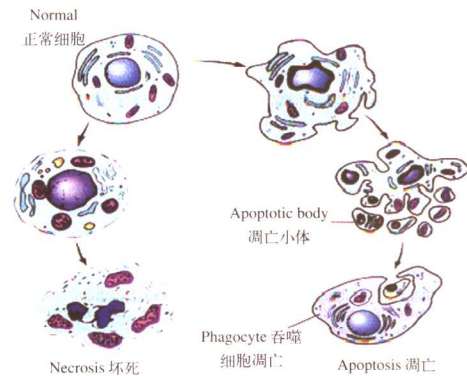


图 1-18 细胞的坏死与凋亡 (The necrosis and apoptosis of cell)



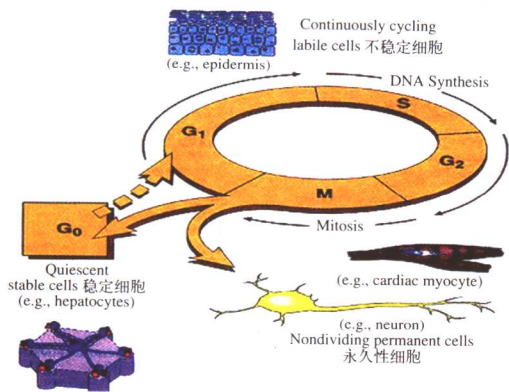


图 2-1 细胞周期与不同类型细胞再生 (cell cycle and regeneration of different kinds of cells)

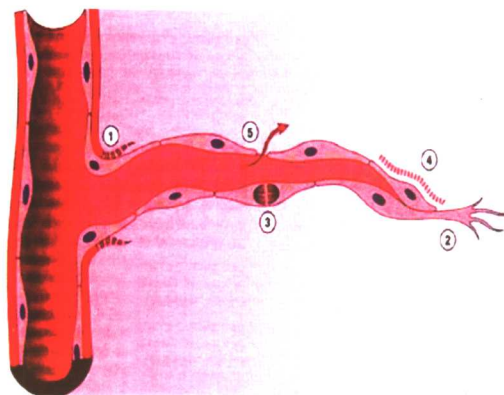


图 2-2 血管再生模式图 (the mole of vessel regeneration)

- ①细胞外基质降解(Proteolysis of ECM)
- ②移动和趋化(Migration and chemotaxis)
- ③增生(Proliferation)
- ④官腔形成, 成熟及生长抑制(Lumen formation, maturation, and inhibition of growth)
- ⑤细胞间通透性增加(increased permeability through gaps and transcytosis)

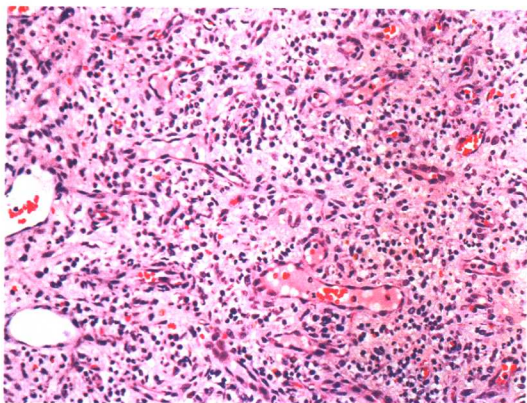


图 2-3 肉芽组织 (granulation tissue)  
在巨噬细胞、中性粒细胞和淋巴细胞的背景上可见许多新生毛细血管  
Many newly formed capillaries are seen in the background of macrophages, neutrophils and lymphocytes

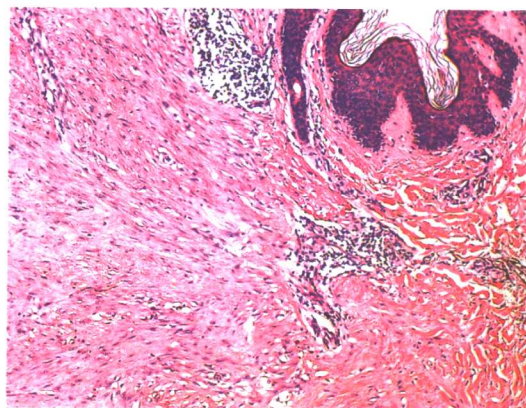


图 2-4 疤痕, 过度增生 (Scar, hypertrophic)  
真皮中可见不规则的成纤维细胞增殖, 伴少量炎细胞浸润  
Irregular proliferation of fibroblasts are noted in dermis, associated with inflammatory cell infiltration

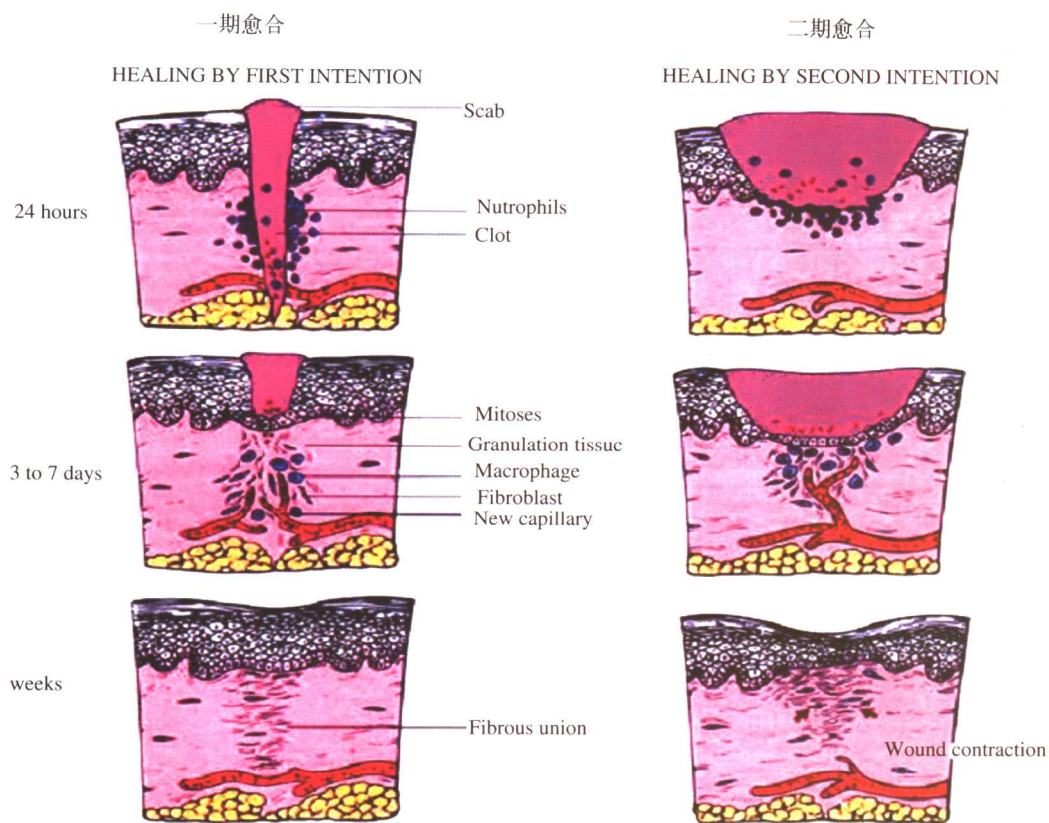


图 2-5 创伤一期 / 二期愈合 (Wound healing by first and second intention)



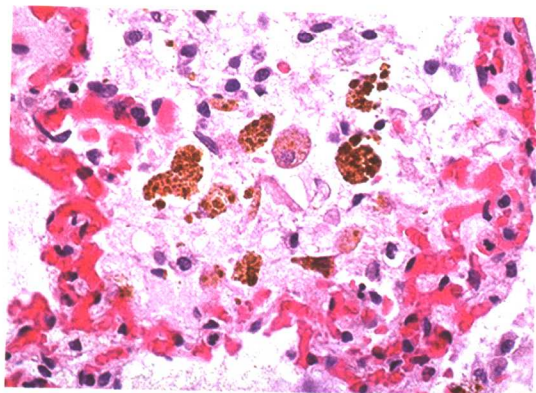


图 3-1 淤血，肺 (Chronic passive congestion, lung)  
肺泡壁增厚，肺泡腔中可见许多充满含铁血黄素的巨噬细胞，称为心衰细胞  
It shows thickened alveolar wall and many hemosiderin laden macrophages in the alveoli named heart failure cell

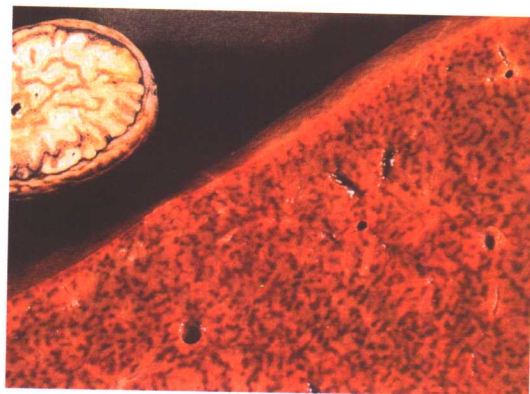


图 3-2 淤血，肝脏 (Chronic passive congestion, liver)  
由于中央静脉淤血，肝脏切面呈特征性的槟榔样外观 (槟榔肝)  
Cut section shows a characteristic nutmeg appearance due to congestion of central viens (nutmeg liver)

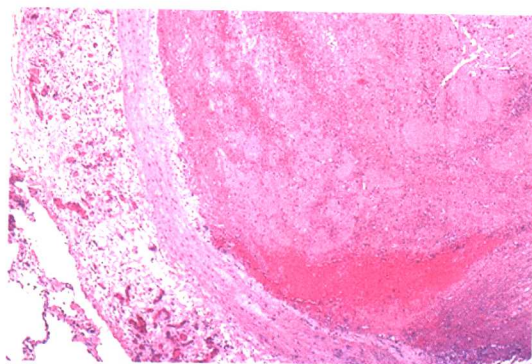


图 3-3 血栓，肺 (Thrombus, lung)  
此为肺动脉分支中一肺部血栓的镜下观  
Here is the microscopic appearance of a pulmonary embolus (PE) in a pulmonary artery branch

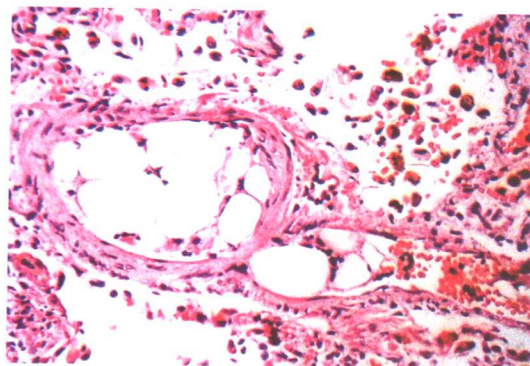


图 3-4 脂肪栓塞，肺 (Fat embolism, lung LM)  
肺组织显微照片可见肺血管中有脂肪组织聚集  
Photomicrograph of the lung shows entrapped fatty tissue lodged in a pulmonary vessel



图 3-5 肾贫血性梗死 (Anemia infarct of kidney)  
贫血性梗死的典型方式。图示肾皮质苍白色的楔形坏死灶 (梗死灶)  
This is the typical pattern with ischemia and infarction, there is a wedge-shaped pale area of coagulative necrosis (infarction) in the renal cortex of the kidney



图 3-6 出血性梗死，肠 (Hemorrhagic infarction, intestine)  
一段小肠颜色变为暗红色，伴水肿。梗死由肠扭转造成  
A long segment of the small intestine shows darkish red discolorating along with edema. This infarction was caused by volvulus



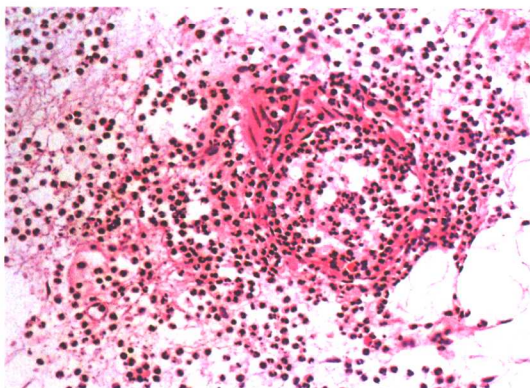


图 4-1 急性炎症 (Acute inflammation)  
扩大的血管中可见中性粒细胞边集和渗出  
Margination and exudation of neutrophils from a dilated vessel is seen

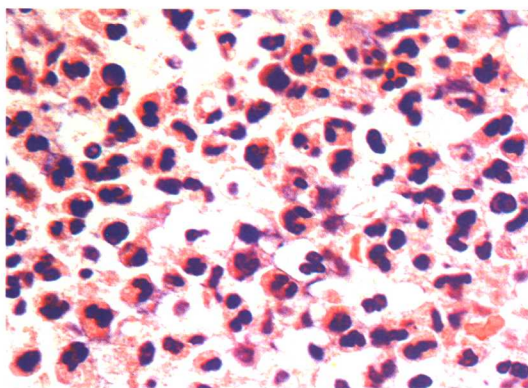


图 4-2 中性粒细胞 (Neutrophils)  
在急性炎症渗出物中可见多叶核细胞和各种形式的变性中性粒细胞  
Cells with multilobulated nuclei and various degenerated forms of neutrophils are seen in this acute inflammatory exudate

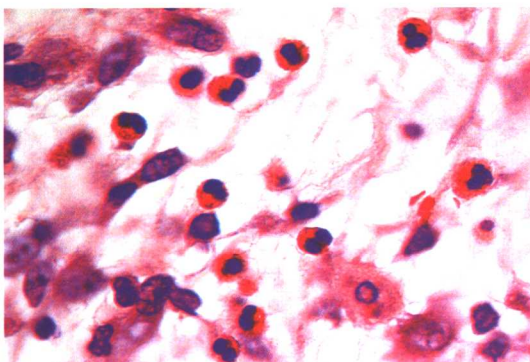


图 4-3 嗜酸性粒细胞 (Eosinophils)  
嗜酸性粒细胞呈典型的眼镜样核 (双叶), 胞浆内强嗜酸性颗粒  
The eosinophils shows characteristic eyeglass-shaped nuclei (bilobed) and intensely eosinophilic granular cytoplasm

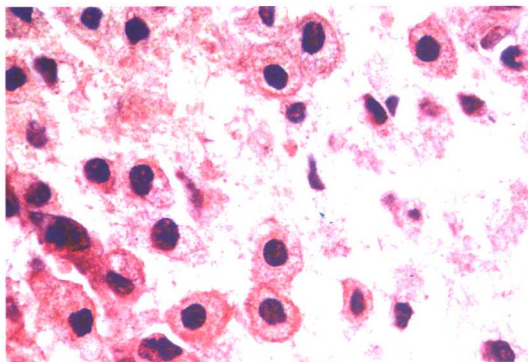


图 4-4 巨噬细胞 (Macrophages)  
这些细胞胞浆丰富、泡沫状, 核圆、居中  
They show abundant foamy cytoplasm and centrally located round nuclei

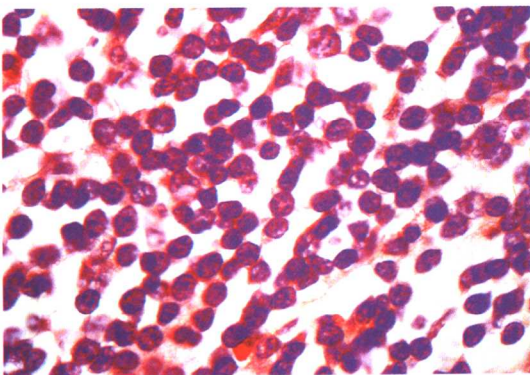


图 4-5 淋巴细胞 (Lymphocytes)  
淋巴细胞核小而圆, 深染, 胞浆很少  
Lymphocytes have small round nuclei with dense chromatin and scanty cytoplasm

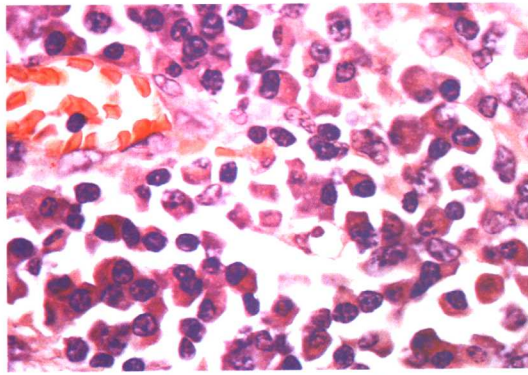


图 4-6 浆细胞 (Plasma cells)  
浆细胞核染色质呈特征性的轮辐状排列, 核偏位。胞浆丰富, 核周浅伊红色空晕  
The nuclei of plasma cells show characteristic cartwheel appearance of the chromatin and eccentrically located. The cytoplasm is abundant and faintly eosinophilic with perinuclear halo



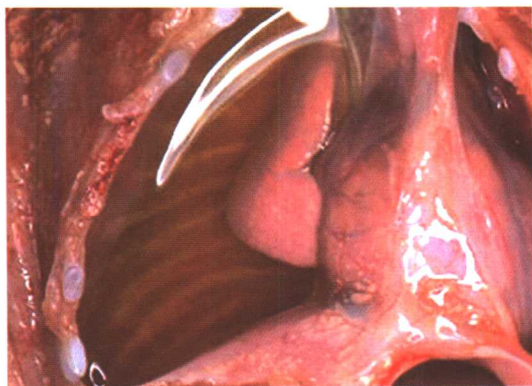


图 4-7 胸膜浆液性渗出 (Pleural effusion, serous)  
右侧胸膜腔澄清的淡黄色液体渗出, 为浆液性渗出  
This is a right pleural effusion. Note the clear, pale yellow appearance of the fluid. This is a serous effusion

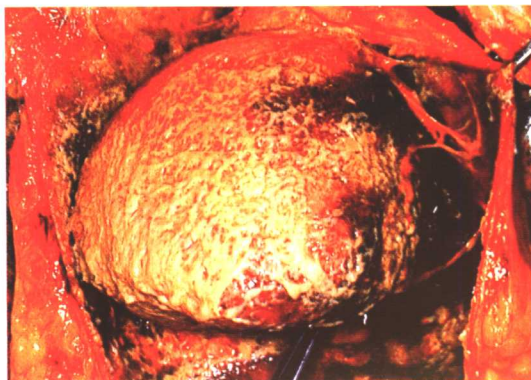


图 4-8 纤维素性心包炎 (Fibrinous pericarditis)  
风湿性心包炎心包见纤维素性渗出和黏附, 似奶油面包样  
Fibrinous exudation and adhesion of pericardium in rheumatic pericarditis resemble bread and butter

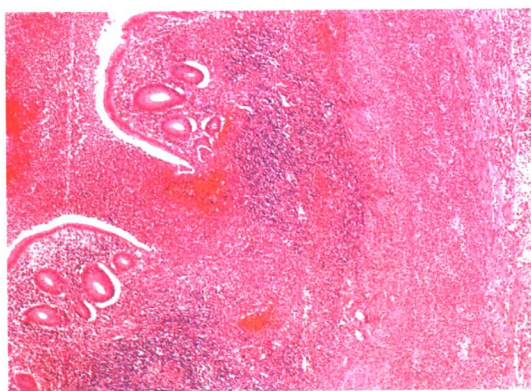


图 4-9 阑尾蜂窝织炎 (Phlegmonous appendicitis)  
阑尾粘膜、肌层及阑尾周围脂肪组织中可见大量中性粒细胞浸润, 伴黏膜溃疡形成  
Heavy infiltration of neutrophils in mucosa, muscle coats and periappendiceal fat along with mucosa ulceration

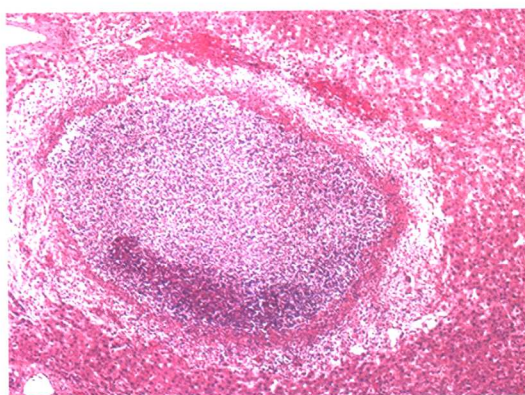


图 4-10 脓肿 (Abscess)  
肝脏中可见一充满大量中性粒细胞的小脓肿灶  
The liver shows a small abscess here filled with many neutrophils

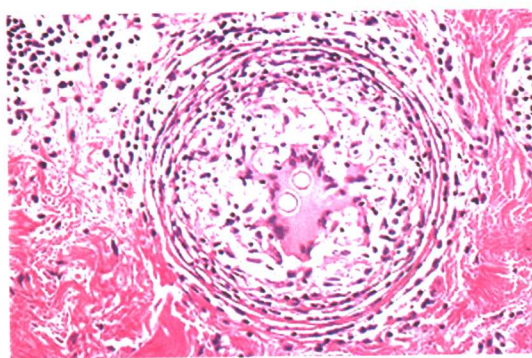


图 4-11 异物肉芽肿 (Foreign granuloma)  
局部的典型肉芽肿性炎, 肉芽肿呈圆形, 在中央的巨细胞有一对球形的吞噬物  
The granuloma seen here demonstrates the typical rounded and focal nature of this type of inflammation. A couple of spherules are present in the giant cell in the center

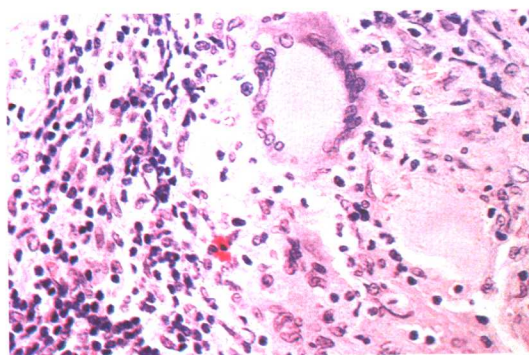


图 4-12 朗汉斯巨细胞 (Langhans giant cell)  
多核巨细胞 (朗汉斯型) 核排列呈马蹄样。亦可见类上皮细胞 (右下)  
Multinucleated giant cells (Langhans type) show horse-shoe-like arrangement of the nuclei. Epithelioid cells are also noted (right lower)



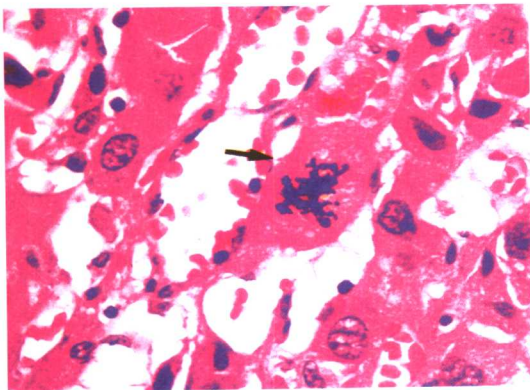


图 5-1 细胞异型性 (Pleomorphism)  
可见多型核和瘤巨细胞。代替两极核分裂，癌中常见多极核分裂 (箭头)  
Pleomorphic nuclei and giant cell formation are seen. Instead of bipolar mitosis, multipolar mitosis (arrows) is commonly seen in cancer

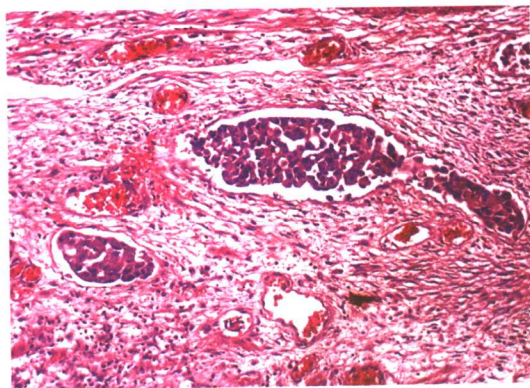


图 5-2 转移癌, 卵巢 (Metastatic carcinoma, ovary)  
扩张的淋巴管中含有癌细胞团。原发肿瘤为胃腺癌  
Dilated lymphatics contain carcinoma cell cluster. Primary tumor was adenocarcinoma of the stomach

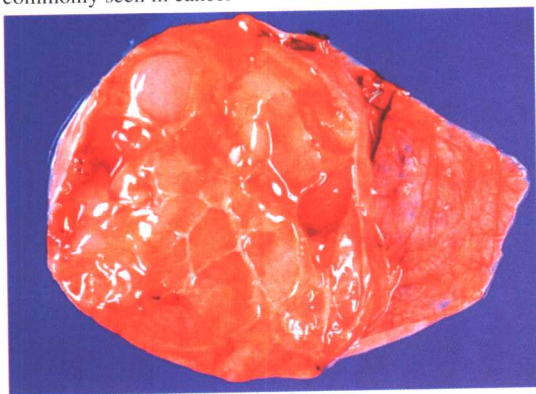


图 5-3 黏液性囊腺瘤, 卵巢 (Mucinous cystadenoma, ovary)  
见一充满黏液的多囊性肿块，囊腔间的分隔纤细  
A multilocular cystic mass is filled with mucinous fluid. The septa of locules are delicate

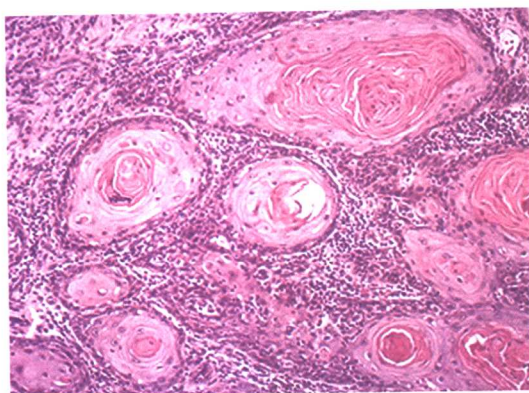


图 5-4 鳞癌 (Squamous cell carcinoma)  
鳞状细胞癌巢中央有结构良好的角化珠形成。肿瘤分化良好  
Well formed keratin pearls are noted in the centers of squamous cell nests. Degree of differentiation is well

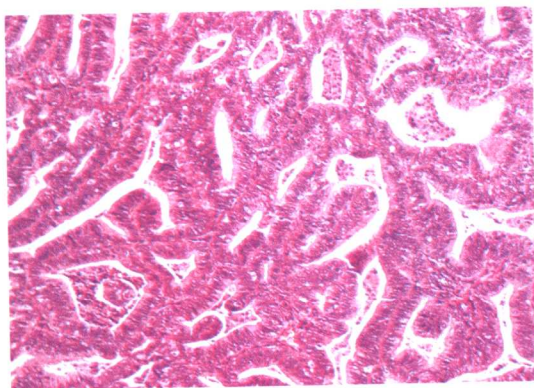


图 5-5 腺癌, 子宫内膜 (Adenocarcinoma, endometrium)  
显微镜下, 界限尚清的腺体呈背靠背样排列, 腺体内衬层叠的不典型柱状上皮细胞  
Microscopically, well defined glands show back to back arrangement and the glands are lined by atypical stratified columnar epithelial cells

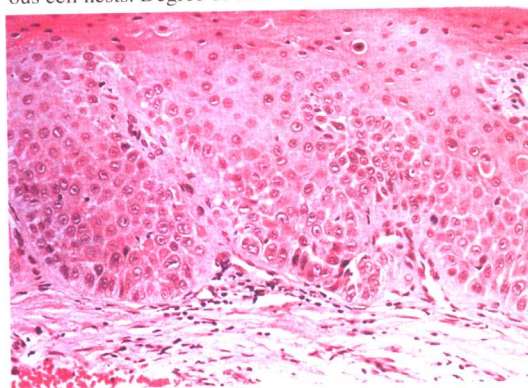


图 5-6 宫颈上皮不典型增生 (宫颈上皮内瘤变 II 级)  
(Dysplasia of cervix (cervical intraepithelial neoplasia grade II))  
异型细胞累及鳞状上皮全层的 1/3 到 2/3  
Atypical cells involve one third to two thirds of the thickness of squamous epithelium



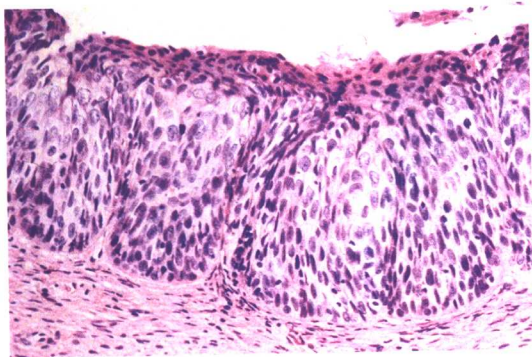


图 5-7 重度不典型增生 (宫颈上皮内瘤变Ⅲ级)

Severe dysplasia (cervical intraepithelial neoplasia grade III)

核深染、拉长的细胞垂直排列，累及鳞状上皮全层 2/3，基底膜完整

Hyperchromatic elongated cells are arranged perpendicular and involves two thirds to full thickness of squamous epithelium with intact basement membrane



图 5-9 多发性平滑肌瘤，子宫  
(Multi-leiomyoma, uterus)

子宫体肌层中见散在的圆形灰白色肿瘤，边界清楚，质硬，大小不一。另可见两个浆膜下肌瘤  
Myometrium of the corpus contains sharply circumscribed, discrete, round, firm, gray-white tumors varying in size. And there are two other subserosal myomas

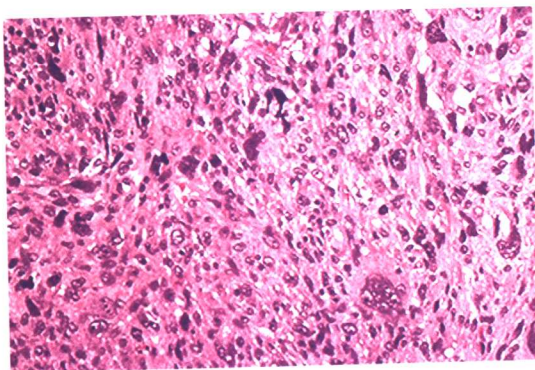


图 5-11 纤维肉瘤 (Fibrosarcoma)

该肉瘤由显著多形性的细胞组成

This sarcoma is composed of very pleomorphic cells

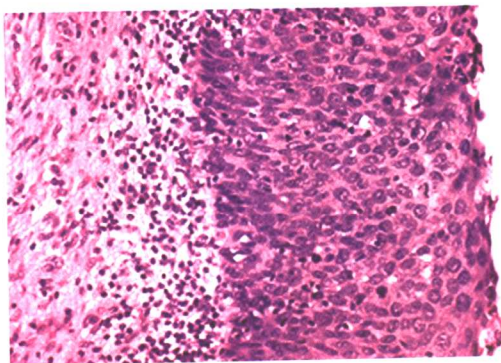


图 5-8 原位癌 (Carcinoma in situ)

全层上皮细胞都异型增生，基底膜尚完整，由于癌细胞局限在上皮内，此情况称“原位癌”

The entire epithelium is dysplastic, and the basement membrane is still intact, the process is called "carcinoma in situ" because the carcinoma is still confined to the epithelium

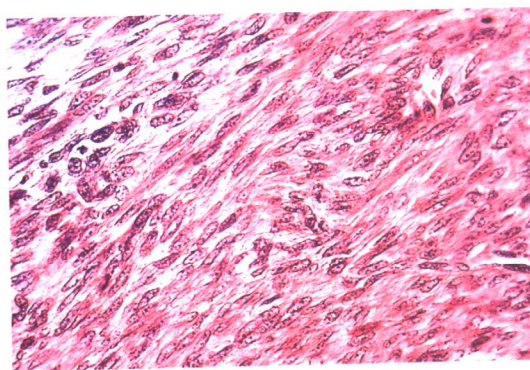


图 5-10 平滑肌瘤，软组织 (Leiomyoma, soft tissue)

平滑肌瘤中见梭形肿瘤细胞，核呈雪茄烟样，未见核分裂  
Spindle tumor cells with nuclei of cigar shape are seen in smooth muscle tumor. Mitosis is absent

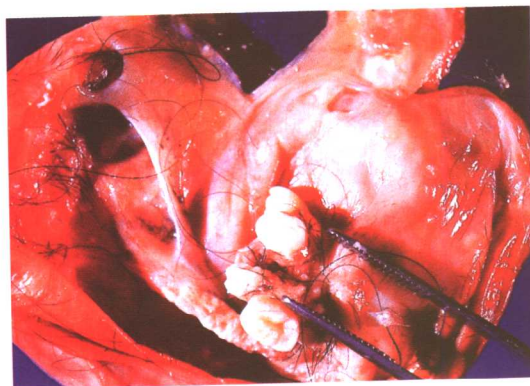


图 5-12 囊性畸胎瘤，卵巢 (Cystic teratoma, ovary)

单房卵巢囊肿的切面可见，囊肿壁薄，内衬灰白、不透明、皱缩的组织。其中可见毛发和牙齿

Cut section of unilocular ovarian cyst shows a thin wall lined by an opaque, gray-white, wrinkled structure. From this, hair shafts protrude and tooth structures are found





图 6-1 动脉粥样硬化, 主动脉 (Atherosclerosis, aorta)  
可见若干小脂纹  
Multiple small fatty streaks are seen

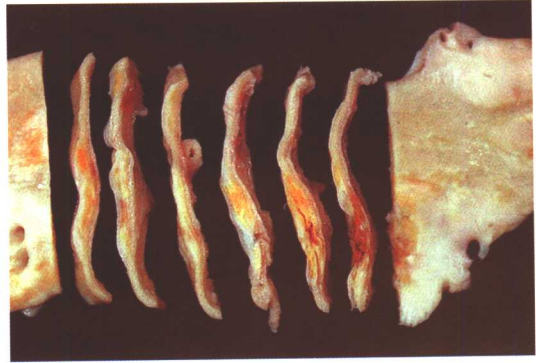


图 6-2 动脉粥样硬化, 腹主动脉 (Atherosclerosis, abdominal aorta)  
主动脉内膜下可见淡黄色粥样斑块。一些斑块中见出血  
Bright yellow atheromas are seen in the subintimal portion of aorta. Some of the atheroma show hemorrhage

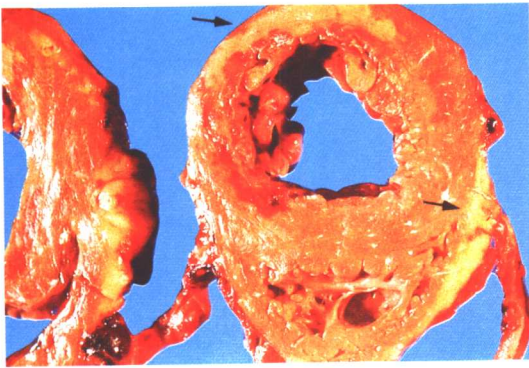


图 6-3 心肌梗死 (Myocardial infarction)  
冠状动脉闭塞后 10 天可见坏死心肌黄色软化, 被薄层的红褐色充血带包绕  
Yellow softening and discoloration of dead myocardium surrounded by thin rim of red brown vascularized margin (arrows) are seen in 10 days after coronary occlusion

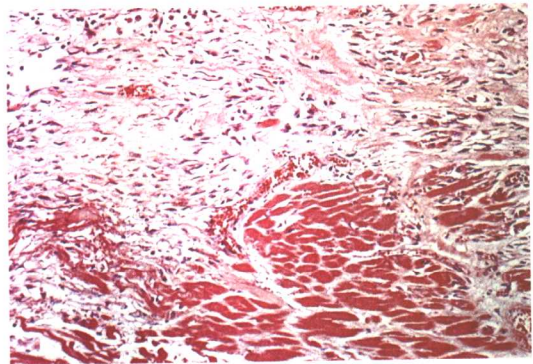


图 6-4 心肌梗死, 纤维化 (Myocardial infarction and fibrosis)  
心肌梗死机化阶段示心肌细胞消失, 成纤维细胞增生  
Organizing stage of myocardial infarction reveals disappearance of muscle cells and proliferation of fibroblasts

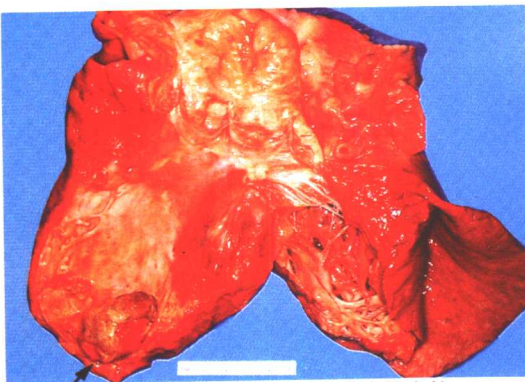


图 6-5 陈旧性心肌梗死合并附壁血栓  
(Old myocardial infarction and mural thrombus)  
由于陈旧性心肌梗死, 心肌变薄, 左室间隔见内膜硬化。并可见一附壁血栓 (箭头)  
Myocardial thinning due to old infarction and endocardial sclerosis of left ventricular septal surface are seen. A mural thrombus (arrow) is associated

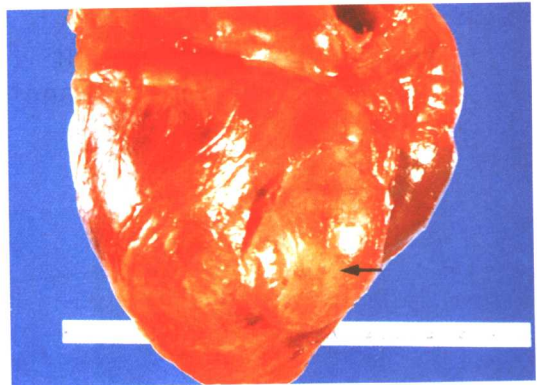


图 6-6 陈旧性心肌梗死合并左室壁瘤  
(Left ventricular aneurysm in old myocardial infarction)  
左室后壁见一突出的卵圆形憩室, 周围心肌纤维化  
Ovoid diverticular protrusion (arrow) in left ventricular posterior wall and surrounding myocardial fibrosis are seen



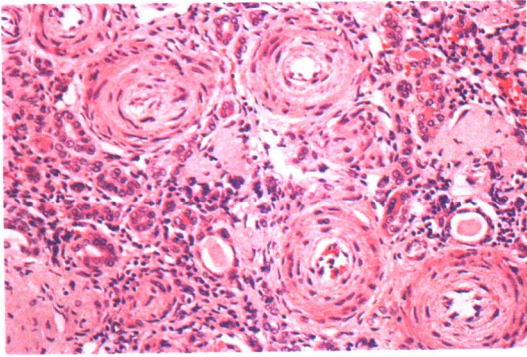


图 6-7 良性高血压-肾硬化  
(Benign hypertension-nephrosclerosis)

动脉示重叠加倍的弹力层,之间纤维组织增多,致管腔狭小  
Arteries show reduplication of elastic lamina and increased fibrous tissue in the media with consequent narrowing of the lumen

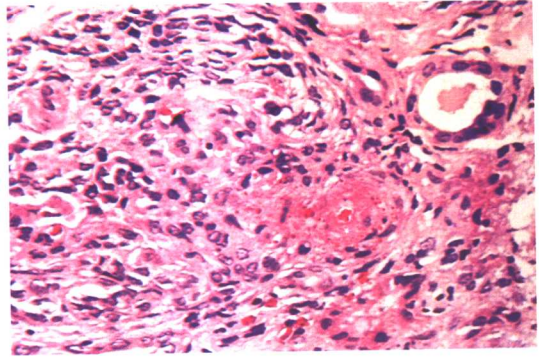


图 6-8 恶性高血压-肾硬化 (Malignant hypertension-nephrosclerosis)

可见纤维素样坏死伴上皮增生,肾小球消失  
Note fibrinoid necrotizing with epithelial proliferation and obliteration of glomerular tuft.



图 6-9 高血压脑出血 (Hypertensive hemorrhage, brain)  
从左侧壳核区发生的脑出血扩展到周围脑白质,形成一巨大血肿

A fresh hemorrhage started from putamen in the left side and extended into the surround cerebral white matter, forming a large hematoma

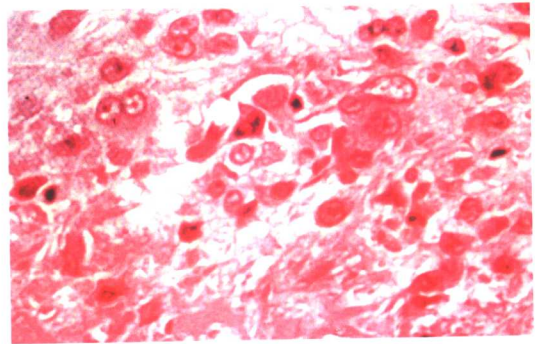


图 6-10 风湿性心肌炎, Ashoff 小体 (Rheumatic myocarditis, Ashoff body)

可见组织细胞和淋巴细胞聚集呈结节样。纤维素样坏死和“枭眼”核是特征性病变  
Nodular collections of histiocytes and lymphocytes are seen. Fibrinoid necrosis and “owl-eyed” nuclei are characteristic features

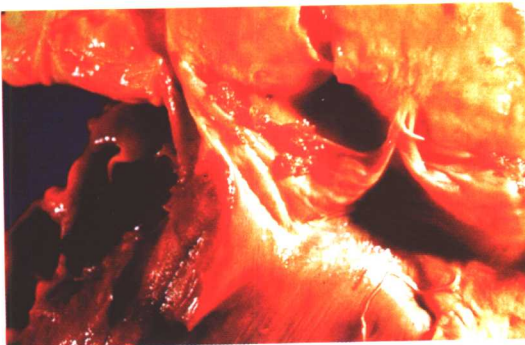


图 6-11 急性风湿性心瓣膜炎 (Acute rheumatic valvulitis)  
主动脉瓣边缘见成行排列的细小念珠样新鲜赘生物  
Rows of tiny beaded fresh vegetations are seen along the lines of aortic valve

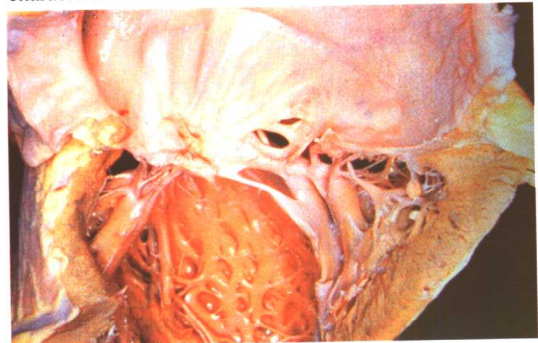


图 6-12 慢性风心二尖瓣狭窄 (Chronic rheumatic mitral stenosis-insufficiency)

可见瓣膜融合、变形、腱索缩短。左心房扩大, 内膜硬化。由于二尖瓣反流, 左心室也扩大  
Commissural fusion, deformity of leaflets and shortening of chordae are seen. Left atrium is markedly dilated and endocardium is sclerotic. Left ventricle is also dilated due to mitral regurgitation