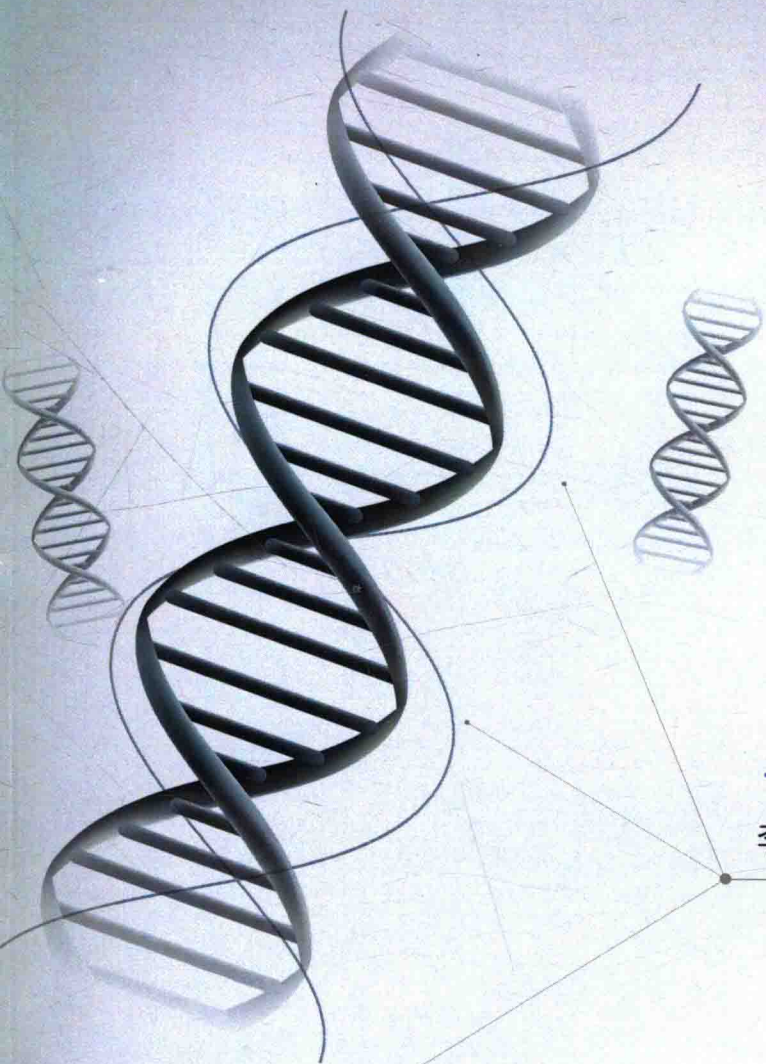


普通高等教育创新规划教材  
高等医学院校教材

ENGLISH FOR  
MEDICAL PURPOSES



李响 高峰 于洋 © 主编

# 新编医学英语教程 I

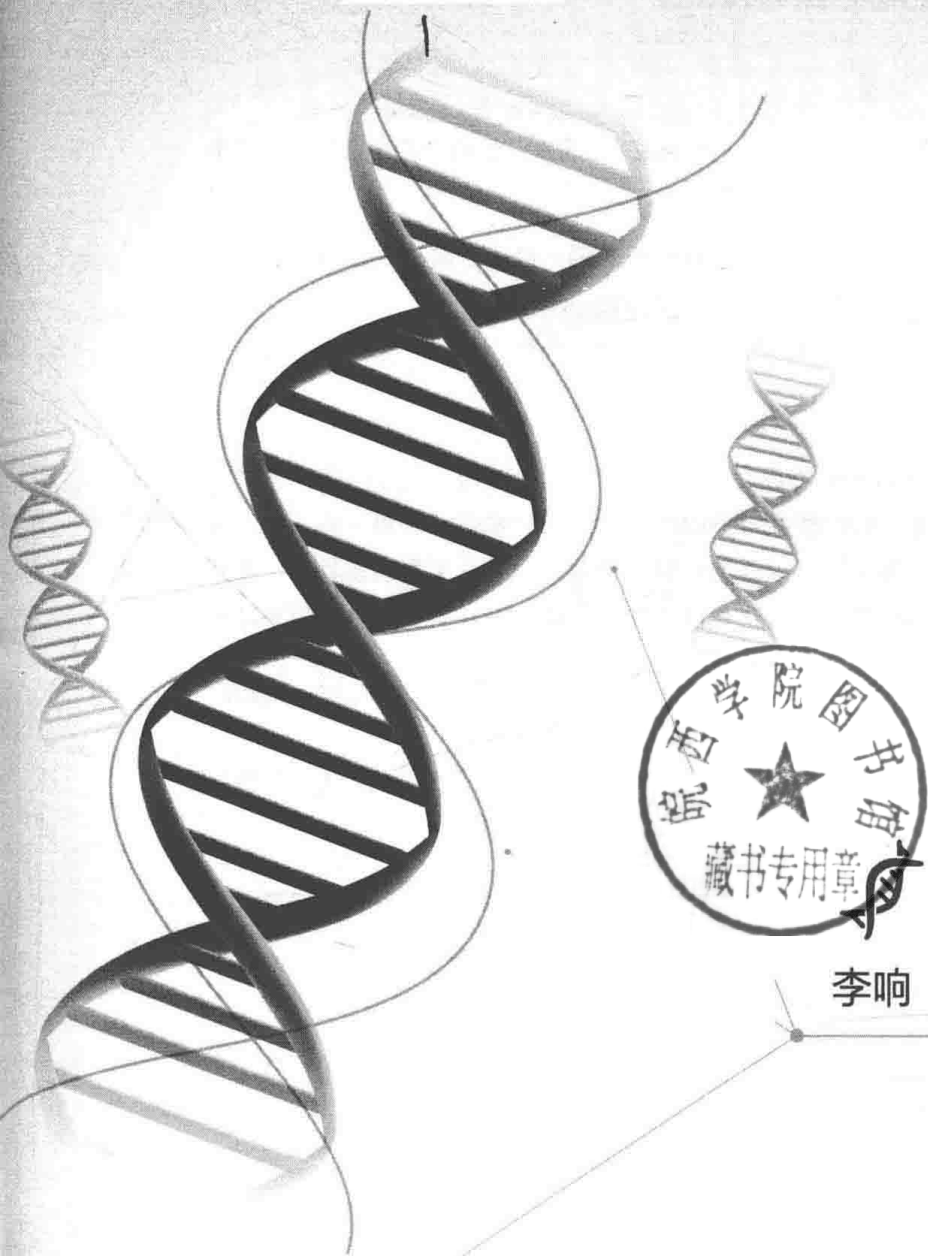
English for Medical Purpose



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高等医学院校教材



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# 新编医学英语教程 Ⅰ

English for Medical Purpose



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## 内容提要

本书为“普通高等教育创新规划教材”“高等医学院校教材”。《新编医学英语教程 I》以人体的常见病为主要线索, 构建独具特色的医学英语学习框架, 介绍人体系统中的典型疾病。每一单元有病例讨论、深度阅读与医学前沿三个部分, 通过文章阅读理解、相关词汇操练、篇章语句翻译等多种形式学习、研究和讨论每个专题, 提高学生综合运用英语进行医学相关专业阅读、口语和书面表达的能力。

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## 新编医学英语教程 I

李 响 高 峰 于 洋 主 编

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# 前 言

本教材以专业地道的英语多角度、全方位地展示临床医学及常见疾病的发病、诊治及研究进展；将知识内容的科学性、前沿性和专业性有机结合于一体。

## 1. 编写宗旨

遵循专业英语特有规律，结合临床医学英语教学实际，满足医学专业学生对专业英语的个性化需求；多方面培养学生的医学英语应用能力。

## 2. 编写理念

突出强调语言的实用性，结合临床医学专业特点，体现现代医学理念，加强医学生跨文化交际能力的培养。

## 3. 编写原则

### (1) 突出实用性

本教材内容贴近临床实践，以病例依托式的编写模式及时反映临床医学研究的新成果、新进展。

### (2) 选材广泛，内容严谨

本教材选材涵盖临床医学的诸多领域，内容涉及临床各科，以常见病、多发病为主。重点突出、语言规范、内容严谨。课文长度和难度适中，可以有效提高学生的专业英语阅读能力。

### (3) 强化阅读翻译，兼顾口语写作

在提高学生专业英语阅读及翻译能力的同时，本教材兼顾医学英语口语交流技能的训练和书面表达能力的培养。

《新编医学英语教程 I & II》分为两册，每册包括 5 个单元，每一单元分为 Case Presentation, Health in Depth (Reading A, Reading B) 以及 Health Today 三个部分，通过文章阅读理解、相关词汇操练、篇章语句翻

译等多种形式学习和研究每个专题，提高学生综合运用英语学习医学知识的能力。

本教材也是完成下列课题的成果之一：

(1) 辽宁省教育科学“十二五”规划立项课题：英语课程对培养医学生人文素质的影响研究，课题批准号：JG14DB118。

(2) 2014 年度大连医科大学本科教学改革研究立项课题：英语课程对培养医学生人文素质的影响研究，课题批准号：DYLX14A05。

(3) 2015 年度大连医科大学本科教学改革研究立项课题：以需求分析为导向的应用型医学翻译人才培养模式研究，课题批准号：DYLX15051。

(4) 辽宁省高等教育学会“十二五”高校外语教学改革专项 2014 年度立项课题：信息化背景下基于“翻转课堂”的医学院校医学专业英语教学环境的构建，课题批准号：WYZDB14082。

(5) 2015 年度大连医科大学本科教学改革研究立项课题：以 MOOC 为支撑的翻转式医学英语教学模式的应用研究，课题批准号：DYLX15049。

(6) 辽宁省教育评价协会 2015 年第一届教学改革与教育质量评价研究立项课题：MOOCs 时代大学英语教师的角色转变，课题批准号：PJHYYB15169。

本教材附录为本书中各个单元的生词汇总，以方便读者查阅参考。

书中有可能存在不足或疏漏之处，欢迎大家批评指正，谢谢！

2015 年 5 月

# Contents



<b>Unit 1 Emergency Medicine</b> .....	1
Reading A Acute Pancreatitis .....	4
Reading B Ischemic Stroke .....	21
<b>Unit 2 Respiratory Disorders</b> .....	41
Reading A Pneumococcal Pneumonia .....	44
Reading B What is Bronchiectasis .....	55
<b>Unit 3 Cardiovascular Disorders</b> .....	73
Reading A Angina Pectoris .....	75
Reading B Treatment of Heart Failure .....	91
<b>Unit 4 Endocrine Disorders</b> .....	109
Reading A Hyperthyroidism .....	111
Reading B Complications of Diabetes Mellitus .....	126
<b>Unit 5 infectious Diseases</b> .....	143
Reading A Influenza .....	146
Reading B Bacterial Meningitis .....	160
<b>Keys</b> .....	178
<b>Glossary</b> .....	193

## Unit 1

# Emergency Medicine

## IN THIS UNIT

### Case Presentation

### Health in Depth

- ◆ *Acute Pancreatitis*
- ◆ *Ischemic Stroke*

### Health Today

- ◆ *Clues to Novel Therapies in Pancreatitis*

### PREVIEW

*Emergency medicine is the medical specialty dedicated to the diagnosis and treatment of the unforeseen illness or injury. It encompasses a unique body of knowledge as set forth in the "Model of the Clinical Practice of Emergency Medicine." The practice of emergency medicine includes the initial evaluation, diagnosis, treatment, and disposition of any patient requiring expeditious medical, surgical or psychiatric care. Emergency medicine may be practiced in a hospital-based or freestanding Emergency Department (ED), in an urgent care clinic, in an emergency medical response vehicle or at a disaster site.*

*Emergency medicine professionals provide valuable clinical and administrative services to the emergency department and other sectors of the health care delivery system.*

*Emergency physicians are the foundation of the health care system's patient safety net. As such they possess a unique understanding of the health care delivery system and are ideally positioned to evaluate, plan, and implement community and regional health policy initiatives.*



## CASE PRESENTATION

**Task** After reading the case report, move on to Reading A for further information on the same topic.

A 26-year-old woman was admitted in the emergency room with severe epigastric pain with radiation to the back, nausea, anorexia, jaundice, choluria and fecal acholia, 38.5°C fever, headache and myalgia. Two weeks before, mild symptoms had begun and in the meanwhile, she was treated with acetaminophen, dipyron, cimetidine and omeprazole with partial response. Four days before admission, she presented significant aggravation of symptoms with epigastric pain associated with abdominal distension, nausea, vomit and dyspnea. She had no previous similar episodes, hepatic disease, gallstone, pancreatitis family history, recent travel, trauma, drug abuse, alcoholism or surgery.

Examination revealed this woman with severe jaundice, pallor, and epigastric abdominal pain during superficial palpation, with no peritonitis signs. Her liver was enlarged, exceeding costal margin by 2cm. Laboratory investigations showed: Hct 33.8% (36.7% ~ 46.4%), Hb 11.5g/dL (12.5g/dL ~ 15.7g/dL), and total leukocyte count of 5,480/ $\mu$ L (3,800/ $\mu$ L ~ 11,000/ $\mu$ L), platelets 352,000/ $\mu$ L (140,000/ $\mu$ L ~ 400,000/ $\mu$ L), total bilirubin 9.58mg/dL ( $\leq$ 1.2mg/dL) with direct bilirubin of 7.74mg/dL ( $\leq$ 0.25mg/dL), triglyceride 133 mg/dL ( $\leq$ 150mg/dL), serum alkaline phosphatase 278IU/L (64 ~ 300IU/dL), lipase 1,012IU/L ( $\leq$  200IU/L), amylase 149IU/L (20 ~ 110UI/L) ...

Abdominal ultrasonography showed a contracted gallbladder without lithiasis, normal biliary tree, liver and pancreas, small amount of fluid localized perihepatic and in rectouterine pouch. The patient received conservative management with analgesia, hydration and fasting. During follow-up, she remained stable, afebrile and her symptoms regressed within three days. She was discharged on



the 6th day of admission after significant clinical and laboratory improvement. During ambulatory follow-up the patient presented complete resolution of the symptoms and biochemical results.

### Case-based discussion

- What did this patient chiefly complain of upon hospital admission?
- According to the examination, what might be the likely diagnosis for this patient?

### Words & Phrases

[1] epigastric	/ˌepɪˈgæstrɪk/	a. 上腹部的
[2] nausea	/ˈnɔːziə/	n. 恶心, 反胃
[3] anorexia	/ˌænəˈreksɪə/	n. 食欲减退, 厌食
[4] jaundice	/ˈdʒɔːndɪs/	n. 黄疸
[5] choluria	/kəˈlʊəˈrɪə/	n. 胆汁尿
[6] fecal	/ˈfiːkəl/	n. 粪便的, 糟粕的
[7] acholia	/eɪˈkɒliə/	n. 无胆汁 (症)
[8] myalgia	/maɪˈældʒɪə/	n. 肌痛, 肌肉痛
[9] acetaminophen	/ˌæsɪˈtæmɪnəʊfən/	n. 对乙酰氨基酚
[10] dipyrene	/ˈdaɪpəɪərəʊn/	n. 安乃近
[11] cimetidine	/səˈmetɪdɪn/	n. 甲氧咪胺
[12] omeprazole	/əvˈmeprəˌzəʊl/	n. 奥美拉唑
[13] dyspnea	/dɪsˈniːə/	n. 呼吸困难
[14] pancreatitis	/ˌpæŋkrɪtəˈtaɪtɪs/	n. 胰腺炎
[15] pallor	/ˈpælə/	n. 苍白 (尤指脸色)
[16] palpation	/pælˈpeɪʃən/	n. 触诊, 扪诊
[17] peritonitis	/ˌperɪtəˈnaɪtɪs/	n. 腹膜炎
[18] triglyceride	/traɪˈglɪsəraɪd/	n. 甘油三酯
[19] serum	/ˈsɪərəm/	n. 浆液, 血清
[20] alkaline	/ˈælkəlaɪn/	n. 碱的, 碱性的
[21] phosphatase	/ˈfɒsfəteɪs/	n. 磷酸酶

[22]	amylase	/ˈæmɪleɪs/	n. 淀粉酶
[23]	ultrasonography	/ˌʌltrəsəˈnɒgrəfi/	n. 超声检查
[24]	lithiasis	/liˈθaɪəsɪs/	n. 结石
[25]	biliary	/ˈbɪljəri/	a. 胆汁的, 输送胆汁的
[26]	rectouterine	/ˌrektəʊˈjuːtəraɪn/	a. 直肠子宫的
[27]	analgesia	/ˌænælˈdʒiːzjə/	n. 痛觉丧失
[28]	afebrile	/erˈfiːbrail/	n. 无热的, 不发热的
[29]	regress	/rɪˈɡres/	n. 倒退; (疾病) 复发

## HEALTH IN DEPTH

### Reading A

#### *Before You Read*

**Task A** Quickly scan the passage. What are the major symptoms of Acute Pancreatitis?

**Task B** Explore online the definition of the following terms, and a one-minute presentation on one of them.

#### Your Tasks

➤ intestinal ileus
➤ renal colic
➤ parenteral nutrition
➤ rebound tenderness



## Acute Pancreatitis

### Para 1

Acute pancreatitis remains an important diagnosis in emergency medicine, accounting for more than 220,000 hospital admissions a year. The frequency of hospitalizations has increased 100% in the last two decades and is predicted to continue to increase, likely related to the growing obesity epidemic.

### Para 2

As an inflammatory disease of the pancreas, acute pancreatitis is typically manifested by a discrete episode of abdominal pain and elevated serum amylase and **lipase** levels.

### Para 3

In contrast to chronic pancreatitis, which is characterized by changes in pancreatic structure and by persistence of dysfunction even after the precipitating cause has been corrected, acute pancreatitis is distinguished by complete **resti-tution** of the pancreas both **morphologically** and functionally after the **derange-ments** that **precipitated** the attack have been corrected.

### Para 4

The typical symptoms of acute pancreatitis are abdominal pain, nausea and vomiting. Pain usually develops first and remains constant, without the waxing and waning<sup>1</sup> pattern typical of intestinal or **renal colic**. The pain is frequently located in the **epigastrium** with radiation to the midback region; it typically lasts for hours to days and is not relieved by vomiting. Abdominal findings vary with the severity of the attack, from minimal local tenderness<sup>2</sup> to marked generalized **rebound** tenderness, guarding<sup>3</sup> and abdominal distention. Bowel sounds are

frequently diminished or absent because of intestinal **ileus**. Jaundice can occur even without stone-induced pancreatitis as a result of compression of the common bile duct by the **edematous** pancreas. With severe attacks, hypotension, tachypnea, tachycardia and **hyperthermia** may be noted. Fever is usually less than 38.5°C. Examination of the skin may reveal tender areas of **induration** and **erythema** resulting from **subcutaneous** fat necrosis. In severe necrotizing pancreatitis, large **ecchymoses** may occasionally appear in the flanks (Grey Turner's sign) or the **umbilical** area (Cullen's sign); these ecchymoses are caused by blood **dissecting** from the **retroperitoneally** located pancreas along the fascial planes.

#### Para 5

In patients who show evidence of smoldering<sup>4</sup> persistent pancreatitis, every effort should be made to exclude infected pancreatic necrosis, an impacted gallstone in the **duodenal ampulla**, and a **pseudocyst**. If abdominal US (Ultrasound) does not demonstrate a pseudocyst or an enlarged pancreas, a CT scan is indicated. CT will often reveal structural abnormalities such as a pseudocyst, pancreatic necrosis, or dilated ducts that may have escaped detection.

#### Para 6

Infected pancreatic necrosis should be suspected in patients who have moderate to severe acute pancreatitis and worsening of symptoms after initial improvement or in those in whom new fever (especially >38.5°C), marked **leukocytosis**, positive blood cultures or, other evidence of sepsis develops. If **necrotic** pancreatitis is suspected, an emergency abdominal CT scan with intravenous contrast enhancement should be performed. Pancreatic or **peripancreatic** infection, usually occurring at least 10 days after the onset of pancreatitis, develops in 40% to 70% of patients with pancreatic necrosis and is the leading cause of **morbidity** and **mortality** in patients with severe acute pancreatitis. A meta-analysis of eight randomized trials showed that **prophylactic broad-spectrum**<sup>5</sup> anti-



biotics that penetrate pancreatic tissue reduce mortality in patients with severe acute pancreatitis. If fever or leukocytosis persists or develops later than 7 to 10 days after diagnosis without an obvious source of infection, fine-needle aspiration of the necrotic area should be performed to exclude infection. The demonstration of **polymorphonuclear** cells and bacteria is highly suggestive of infected pancreatic necrosis and should lead to urgent surgical intervention because the mortality in conservatively treated patients with infected pancreatic necrosis is greater than 60%. Antibiotic therapy should be initiated or continued to cover gram-negative enteric and **anaerobic** organisms; antibiotics with high penetration into pancreatic tissue include **fluoroquinolones** and **metronidazole**. Standard regimens<sup>6</sup> include **imipenem**, 500mg intravenously three times daily, or **pefloxacin**, 400mg intravenously twice daily, and/or metronidazole, 500mg three times daily for 10 to 14 days.

### Para 7

Management of clinically **sterile** pancreatic necrosis remains controversial; the necrotic tissue may resolve or gradually evolve into a pseudocyst or a region of organized pancreatic necrosis. In patients with persistent necrosis, 40% or more become infected during their course; others may experience persistent organ failure despite prolonged supportive care. Careful clinical monitoring and repeated dynamic CT scans are recommended to monitor the progression of **necrotizing** pancreatitis. If the condition deteriorates, surgery should be **contemplated**.

### Para 8

Pancreatic pseudocysts occur in 10% to 20% of cases of acute pancreatitis. The diagnosis is most easily made by abdominal US or CT scan. Smaller cysts tend to disappear without specific treatment. Cysts that have been present for more than 6 weeks and are larger than 5cm in diameter usually require treatment. The presence of severe pain, rapid expansion, or complications such as bleeding, leakage, or rupture may accelerate the need to intervene. Internal surgical

**drainage** into the stomach or small intestine remains the most widely used treatment, but endoscopic or **percutaneous** drainage can be an attractive nonsurgical option.

### Para 9

Acute pancreatitis can cause true pancreatic ascites, defined by the presence of large amounts of fluid that is rich in pancreatic amylase and protein and that results from a communication between the pancreatic duct or a pseudocyst and the peritoneal cavity. Acute pancreatitis may infrequently cause bleeding or **thrombosis** of peripancreatic vessels. Arterial hemorrhage occurs when a **pseudocyst** erodes into a pancreatic artery and transforms the pseudocyst cavity into a pseudoaneurysm. The diagnosis is made by CT scan and **angiography**; the bleeding artery can often be treated by **embolization**, but surgical intervention is sometimes required. The most common venous complication of pancreatitis is occlusion of the splenic vein, which may result in **splenomegaly** and gastric **varices**.

### Para 10

The two most important systemic<sup>7</sup> complications of acute pancreatitis are renal and respiratory failure. Renal failure generally occurs as a result of hypovolemia and decreased renal perfusion. Prevention and treatment of pancreatitis-associated renal failure depend, to a large extent, on correction of fluid and electrolyte abnormalities. Mild and transient respiratory failure is believed to be the result of **infradiaphragmatic** inflammation, splinting of respiration, and **atelectasis**. Arterial hypoxemia with an arterial PO<sub>2</sub> less than 70mmHg is often associated with mild respiratory **alkalosis** and is frequently noted in patients with severe acute pancreatitis; it is usually detected within the first 2 or 3 days of an attack. **Hypoalbuminemia** and fluid overload are probably important contributory factors. In most cases, the respiratory failure generally improves as the acute phase of pancreatitis ends. Some patients, however, progress to a more severe



form of respiratory failure that resembles ARDS (Acute Respiratory Distress Syndrome). This poor **prognostic** sign is frequently associated with a complicated clinical course or death. Pancreatitis-associated ARDS results from injury to the alveolar membrane or degradation of surfactant by circulating enzymes, such as **phospholipase**, that may be released from the inflamed pancreas. Treatment is mainly supportive because specific therapy for pancreatitis-associated ARDS has not been defined.

### Para 11

The natural history of pancreatitis is unpredictable and depends on the cause. In gallstone pancreatitis, **cholecystectomy** will prevent further attacks. **Hyperparathyroidism**, **hyperlipidemia** and implicated<sup>8</sup> drugs may cause or contribute to pancreatitis; elimination of these **precipitants should** prevent recurrence. With the exception of<sup>9</sup> alcoholic pancreatitis, progression from acute to chronic pancreatitis is rare. In most cases of alcoholic pancreatitis, structural and functional abnormalities have generally already occurred, so pancreatic structure and function may continue to deteriorate despite alcohol **abstinence**, albeit<sup>10</sup> at a slower pace. Nevertheless, alcohol abstinence will decrease the risk for future episodes of acute pancreatitis.

### Para 12

The mainstay of treatment for acute pancreatitis is supportive care. This includes aggressive fluid management, adequate **opiate** analgesia, early nutrition, and oxygen administration. Fluid resuscitation is an especially important aspect of treatment. **Hypovolemia** plays a central role in pancreatic **necrosis** by compromising<sup>11</sup> pancreatic **microcirculation**. Fluids should be **bolused** initially to achieve **hemodynamic** stability, followed by rates of 250 ~ 500cc/hr to **replete** fluid losses. **Crystalloid** is generally preferred. Colloid may be considered in specific situations when **hematocrit** is less than 25% or **albumin** is less than 2g/dL.



### Para 13

The choice of **parenteral** analgesic should be based on provider<sup>12</sup> comfort and patient relief. Traditional teaching has been to avoid **morphine** as it causes spasm of the **sphincter** of Oddi and to favor **meperidine**, which has no such effect. Meperidine, however, has fallen out of favor because of its adverse effect profile. No outcomes-based evidence has emerged that morphine is contraindicated in acute pancreatitis.

### Para 14

Acute pancreatitis is a **hypercatabolic** state and therefore adequate nutrition is critical. Oral feeding can be considered in patients as early as 24 hours. It is now recognized that **enteral** nutrition offers advantages over parenteral nutrition. These include preservation of the gut barrier, prevention of bacterial **translocation**, decreased cost, and avoidance of catheter-related complications.

### Para 15

Antibiotic **prophylaxis** is another area of acute pancreatitis that is under **scrutiny**. Most experts agree that in mild pancreatitis, there is no indication<sup>13</sup> for antibiotics. Severe acute pancreatitis offers more of a challenge. In the emergency department, it is often impossible to distinguish SIRS (Systemic Inflammatory Response Syndrome) secondary to acute pancreatitis from that caused by bacterial sepsis.

### Para 16

Emergency physicians should be familiar with the optimal timing of ERCP (**Endoscopic Retrograde Cholangio-pancreatography**) in the evaluation of acute pancreatitis. In patients with presumed biliary pancreatitis, the presence of **choledocholithiasis** or **cholangitis** mandates an urgent ERCP (within 24 hours of **admission**). Unrelieved obstruction can lead to worsening pancreatitis.

(1530 words)