

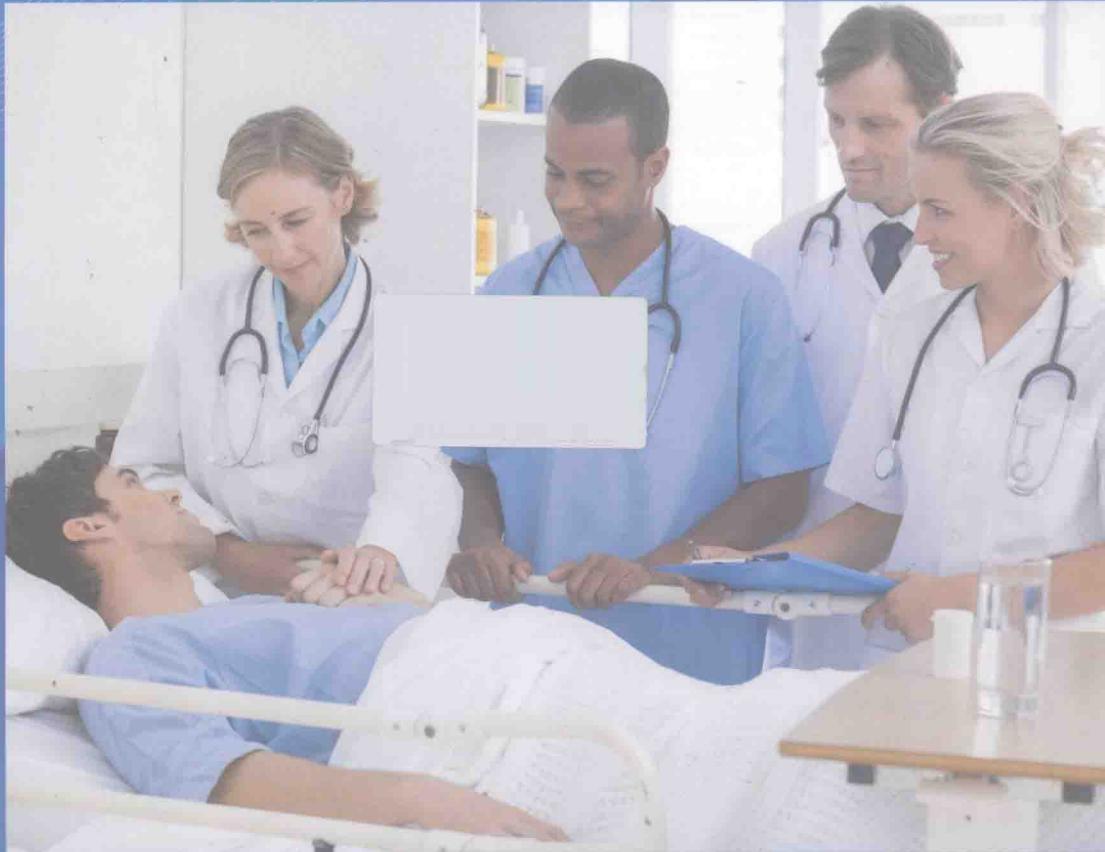
大学医用英语系列教材

总主编 马江涛 奎晓兰

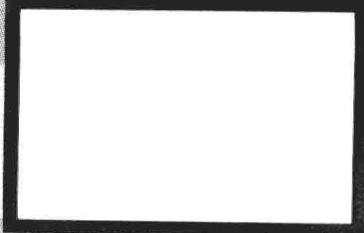
English for Clinical Medicine

临床医学英语教程

主编 皇甫希才 李睿泽



復旦大學出版社



English for Clinical Medicine

临麻医学英语教程

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前　言

《大学医用英语系列教材》是为医学类高等院校医学专业学生编写的专业英语教材,由包头医学院和内蒙古医科大学合作编写,马江涛和奎晓兰担任总主编。本系列教材由《基础医学英语教程》、《临床医学英语教程》和《公共卫生英语教程》3册组成,每册12个单元,附有光盘。

改革开放以来,医学领域国际间的交流日益频繁,越来越多的医务人员开始走出国门,走向世界。外资医院也开始进入国内医疗系统,医务人员获得以英语为工作语言的国际化医疗岗位的机会与日俱增。医学领域需要大批既掌握了丰富的医学专业知识,又具备较强的以英语为工具获取专业信息,进行学术交流,以及从事科学研究等能力的复合型专业人才。基于这种发展趋势和与之相适应的客观需求,为使医学院校的专业学生更好地掌握英语信息交流能力,按照教育部提出的大学生完成基础阶段英语学习之后应进入结合各自专业的专业英语学习阶段(应用提高)的总体要求,根据以往专业英语的教学实践并结合当前医学生学习、掌握英语的能力和现有实际英语水平,我们组织具有丰富专业英语教学经验的教师编写了这套系列教材。

1. 编写宗旨

本系列教材的编写宗旨是:遵循现代外语教学理念,按照专业英语的特有规律并结合目前医学英语教学的实际,满足医学专业学生对专业英语的个性化需求;全面培养学生医学英语的应用能力,尤其是阅读和翻译能力,使他们在今后的医疗和科研工作中能用英语有效地获取专业知识和相关信息,并能以英语作为工作语言进行学术交流。

2. 编写理念

遵循语言规律,重视专业特点,反映医学发展现状,体现现代医学理念。本系列教材的编写既遵循英语语言的一般性规律,又充分考虑医学英语的特殊性和复杂性,注重体现科学性、反映时代性和突出实用性。

3. 编写原则

1) 强化专业特点,满足个性化需求

医学英语是与医学专业知识相结合的专门用途英语。据此,本系列教材分为《基础医学英语教程》、《临床医学英语教程》和《公共卫生英语教程》3册,以满足医



学专业学生对专业英语的个性化需求。课文选材学科明确,按医学学科或专业划分单元,每个单元介绍一种与该学科相关的理论或典型疾病及其治疗手段或方法。

2) 选材范围宽泛,内容严谨科学

本系列教材选材范围较广,几乎涵盖了基础医学、临床医学和公共卫生的主要领域。所选材料均来自国外较权威的报纸、杂志、教材及专著。这些材料语言规范、内容严谨,体现所属领域的发展与成果。每个单元的A、B两篇课文都属同一学科领域、同一个专题或同一解剖学体系。课后主要练习内容也与课文主题一致。

3) 阅读翻译为主,兼顾口语写作

根据学生未来主要通过阅读获取信息的工作实际,教材以阅读与翻译为主,同时兼顾口语与写作,配有问题讨论与开放式写作练习。本系列教材配有较多练习,形式多样实用,分为4类8种形式,以激发学生的学习兴趣,深化对课文的理解及巩固课内所学内容。

4) 注重学以致用,强调自主学习

教材的内容与形式紧扣实践需要,具有较强的实用性,有利于学生学以致用。教材内容分为课内教学和课外自主学习两部分,以培养和提高学生自主学习能力。为方便学生自学、弥补课内学时不足和提高学习效率,本教材配有光盘,提供有声资料。B篇课文提供课后注释和参考答案。

4. 使用建议

《基础医学英语教程》适用于药学、医学检验、护理等4年制专业;《临床医学英语教程》适用于临床、法医、口腔、影像、放射和麻醉等5年制专业;《公共卫生英语教程》适用于预防医学、卫生事业管理和卫生检验等4年制或5年制专业。《基础医学英语教程》建议授课学时数为48学时,《临床医学英语教程》为60学时,《公共卫生英语教程》为36学时。

主编

2013年6月

本册使用说明

《大学医用英语系列教材·临床医学英语教程》是为医学专业学生编写的专业英语教材,适用于临床、法医、口腔、影像、放射和麻醉等5年制专业学生。本教材旨在帮助已完成基础阶段英语学习的学生学习和掌握专业临床英语,全面培养学生医学英语的应用能力。

本册涉及临床医学的内科、外科、妇科、产科、骨科、消化、免疫、内分泌等主要学科内容。全书共12单元,每单元2篇文章,分为精读课文(Text A)和泛读课文(Text B);Text A的内容为疾病介绍或讨论,Text B的内容为治疗或治疗手段介绍。书末有附录,包括总词汇表;医学词汇常用词缀表;希腊语和拉丁语名词单复数不规则变化表和Text B练习参考答案。

每单元包括课前准备、课堂学习、课外阅读和课后练习4个部分。

课前准备:命题讨论。在教师的提示下学生围绕主题展开讨论,提高学生专业英语听说能力。

课堂学习:Text A。供学生课内学习,由教师组织教学,详细讲解疑难点并提供参考答案和参考译文。

课外阅读:Text B。供学生课外学习,以自学为主。课文后附有注释,书后附有练习参考答案。

课后练习:与主题相关的综合性练习。Text A练习分为阅读理解、词汇和短语、翻译和写作4类。阅读理解练习包括回答问题、多项选择和正误判断;词汇和短语练习包括选词填空和完形填空;翻译练习分为英汉和汉英互译;写作练习分为摘要写作和报道写作。Text B练习包括回答问题和正误判断两种练习。

本教材可供两学期使用,建议授课学时为60学时,每学期30学时。

本教材由包头医学院外国语系负责编写。主编为皇甫希才和李睿泽,编者有闫少华、李娟、李睿泽、皇甫希才、赵清、曹志红。全体编者参与了本教材的策划、选材和审定。除主编外,李娟老师对本书的编排体例、课后词汇和部分练习进行



了核校和修改。包头医学院图书馆付建刚老师为本教材的素材搜集提供了很大帮助。谨此一并致谢。

囿于编者专业素养、学术水平和编写条件,本教材难免有疏漏和不妥之处,敬请专家和教职同道指谬赐教,诚望广大读者批评指正。

编 者

2013年6月

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Kidney Disease and Treatment



Warming-up Exercises

1. What are the characteristics of acute renal failure?
2. How many categories are the causes of acute renal failure divided into?
3. How should people prevent acute renal failure?

Text A

Acute Renal Failure

The Characteristics of Acute Renal Failure (ARF) and the Classification of Its Causes

Acute renal failure (ARF) is characterized by a rapid decline in glomerular filtration rate (GFR) over hours to days. Depending on the exact definition used, ARF complicates approximately 5%—7% of hospital admissions and up to 30% of admissions to intensive care units. Retention of nitrogenous waste products, oliguria (urine output <400 mL/d contributing to extracellular fluid overload), and electrolyte and acid-base abnormalities are frequent clinical features. ARF is usually asymptomatic and diagnosed when biochemical monitoring of hospitalized patients reveals a new increase in blood urea and serum creatinine concentrations. For purposes of diagnosis and management, causes of ARF are generally divided into three major categories: (1) diseases that cause renal hypoperfusion, resulting in decreased function without frank parenchymal damage (prerenal ARF, or azotemia) ($\sim 55\%$); (2) diseases that directly involve the renal parenchyma (intrinsic ARF) ($\sim 40\%$); and (3) diseases associated with urinary tract obstruction (postrenal ARF) ($\sim 5\%$) (Fig. 1–1, 1–2). ARF is often considered to be reversible, although a return

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to baseline serum creatinine concentrations postinjury might not be sufficiently sensitive to detect clinically significant irreversible damage that may ultimately contribute to chronic kidney disease. ARF is associated with significant in-hospital morbidity and mortality, the latter in the range of 30%—60%, depending on the clinical setting and presence or absence of nonrenal organ system failure.

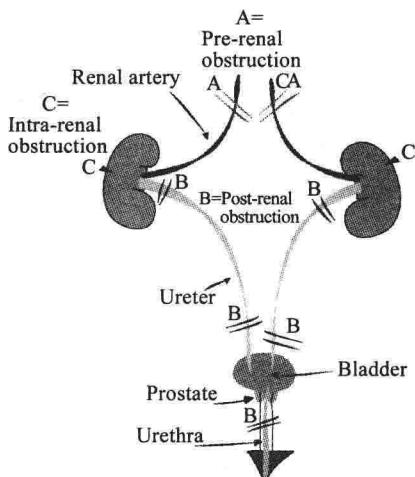


Fig. 1 - 1 The categories of ARF

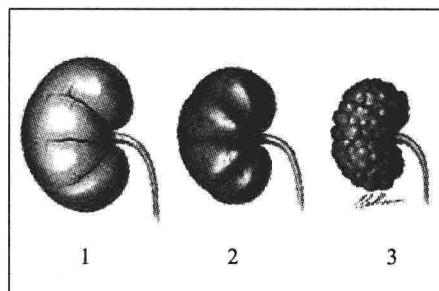


Fig. 1 - 2 The process of ARF

Etiology and Pathophysiology

The most common form of ARF (prerenal azotemia) is prerenal ARF, which occurs in the setting of renal hypoperfusion. Prerenal ARF is generally reversible when renal perfusion pressure is restored. By definition, renal parenchymal tissue is not damaged. More severe or prolonged hypoperfusion may lead to ischemic injury, often termed acute tubular necrosis, or ATN. Thus, prerenal ARF and ischemic ATN fall along a spectrum of manifestations of renal hypoperfusion. Prerenal ARF can complicate any disease that induces hypovolemia, low cardiac output, systemic vasodilatation, or selective intrarenal vasoconstriction.

Clinical Assessment

Symptoms of prerenal ARF include thirst and orthostatic dizziness. Physical signs of orthostatic hypotension, tachycardia, reduced jugular venous



pressure, decreased skin turgor and dry mucous membranes suggest prerenal ARF. Careful clinical examination may reveal stigmata of chronic liver disease and portal hypertension, advanced cardiac failure, sepsis, or other causes of reduced "effective" arterial blood volume. Case records should be reviewed for documentation of a progressive fall in urine output and body weight and recent initiation of treatment with diuretics, NSAIDs, ACE inhibitors, or ARBs.

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Prevention

Because there are no specific therapies for ischemic or nephrotoxic ARF, prevention is of paramount importance. Many cases of ischemic ARF can be avoided by close attention to cardiovascular function and intravascular volume in high-risk patients, such as the elderly and those with preexisting chronic kidney disease. Indeed, aggressive restoration of intravascular volume has been shown to dramatically reduce the incidence of ischemic ARF after major surgery or trauma, burns, or cholera. The incidence of nephrotoxic ARF can be reduced by tailoring the administration (dose and frequency) of nephrotoxic drugs to body size and GFR. In this regard, it should be noted that serum creatinine is a relatively insensitive index of GFR and may overestimate GFR considerably in small or elderly patients. For purposes of drug dosing, it is advisable to estimate the GFR using the Cockcroft-Gault formula (which factors in age, sex, and weight) or the simplified Modification of Diet in Renal Disease (MDRD) equation (which factors in age, sex, weight, and race). Of note, these equations cannot be used to estimate GFR when creatinine is not at steady state (e.g. during evolving ARF).

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Adjusting drug dosage according to circulating drug levels also appears to limit renal injury in patients receiving aminoglycoside antibiotics, cyclosporine, or tacrolimus. Diuretics, NSAIDs, ACE inhibitors, ARBs, and vasodilators should be used with caution in patients with suspected true or "effective" hypovolemia or renovascular disease as they may precipitate prerenal ARF or convert the latter to ischemic ARF. Allopurinol and forced alkaline diuresis are useful prophylactic measures in patients at high risk for acute urate nephropathy (e.g. cancer chemotherapy in hematologic malignancies) to limit uric acid generation and prevent precipitation of urate crystals in renal tubules.

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70 Rasburicase, a recombinant urate-oxidase enzyme, catalyzes enzymatic oxidation of uric acid into a soluble metabolite (allantoin). Forced alkaline diuresis may also prevent or attenuate ARF in patients receiving high-dose methotrexate or suffering from rhabdomyolysis. *N*-acetylcysteine limits acetaminophen-induced renal injury if given within 24 h of ingestion.

75 A number of preventive measures have been proposed for contrast nephropathy. It is clear that hydration is an effective preventive measure. Other measures that have been proposed include loop diuretics and mannitol, dopamine, fenoldopam, *N*-acetylcysteine, theophylline, and sodium bicarbonate. Despite favorable experimental data, there is insufficient evidence to support the use of loop diuretics or mannitol to prevent radiocontrast nephropathy or 80 any other cause of ARF. Likewise, despite its widespread use, dopamine has proved ineffective as a prophylactic agent. Fenoldopam, a dopamine α_1 specific agonist approved for use as a parenteral antihypertensive agent, has been tested in several clinical trials and does not appear to reduce the incidence 85 of contrast nephropathy. Moreover, fenoldopam is associated with significant side effects, including systemic hypotension, and its use as an agent to prevent radiocontrast nephropathy should be discouraged. In contrast, several (relatively small) randomized clinical trials (RCTs) have suggested a clinical benefit to the use of *N*-acetylcysteine, although have been inconclusive.

90 However, aside from the potential hazards associated with a delay in radiographic imaging, *N*-acetylcysteine appears to be safe, and its use in patients at high risk for radiocontrast nephropathy is reasonable, based on its low side effect profile. Larger RCTs will be required to show definitive benefit. Theophylline and aminophylline (adenosine antagonists) offer the potential advantage of use immediately preceding radiocontrast administration, 95 although the benefit, if present, appears marginal in most studies. Lastly, volume expansion with bicarbonate-containing intravenous fluids has been suggested to be superior to sodium chloride (saline) administration and showed a significant benefit in a single center RCT. Unlike *N*-acetylcysteine, the use of sodium bicarbonate does not obligate a delay in imaging (the published 100 protocol began intravenous fluids 1 h before the imaging study was begun). Whether a combination of strategies (e. g. *N*-acetylcysteine + sodium bicarbonate) offers additive benefit and that patients require treatment remain



unclear and warrant further study.

Specific Therapies

By definition, prerenal ARF is rapidly reversible upon correction of the primary hemodynamic abnormality, and postrenal ARF resolves upon relief of obstruction. To date there are no specific therapies for established acute kidney injury (AKI). Management of these disorders should focus on elimination of the causative hemodynamic abnormality or toxin, avoidance of additional insults, and prevention and treatment of complications. Specific treatment of other causes of intrinsic renal ARF depends on the underlying pathology. 110

(1,177 words)



New Words and Phrases

renal [ˈriːnəl] <i>a.</i>	肾脏的
glomerular [gloʊ'merjʊlər] <i>a.</i>	肾小球的
nitrogenous [naɪt'rɒdʒənəs] <i>a.</i>	含氮的, 氮的
oliguria [ɔ̄lɪ'gjuəriə] <i>n.</i>	尿过少, 少尿(症)
extracellular [ˌekstrə'seljʊlər] <i>a.</i>	(位于或发生于)细胞外的
electrolyte [ɪ'lektrəʊlaɪt] <i>n.</i>	电解质; 电解(溶)液
acid-base [ˈæsɪd-bēs] <i>a.</i>	酸碱的
asymptomatic [ə'simptəmætɪk] <i>a.</i>	无临床症状的
serum [ˈsiərəm]([复]-rums/-ra) <i>n.</i>	血清; 浆液
creatinine [kri:ˈætniːn] <i>n.</i>	肌酸酐, 肌酐
hypoperfusion [haɪpəpʊfə'fjuːzən] <i>n.</i>	灌注不足
parenchymal [pə'reŋkīməl] <i>a.</i>	实质的; 主质的
azotemia [ə'zət̬'tiːmɪə] <i>n.</i>	氮质血症
parenchyma [pə'reŋkīmə] <i>n.</i>	实质; 主质; 薄壁组织
morbidity [mɔ̄'bɪdɪt̬] <i>n.</i>	病态, 发病; 发病率
mortality [mɔ̄'tælt̬ɪ] <i>n.</i>	死亡率, 病死率
etiology [iːti'ɒlədʒɪ] <i>n.</i>	病因学
pathophysiology [ˈpæθəoʊfiːzɪə'ɒlədʒɪ] <i>n.</i>	病理生理学
ischemic [iːskiːmɪk] <i>a.</i>	缺血的



tubular [tju:bjʊlə] a.	小管的,管状的
necrosis [ne'krəʊsɪs] n.	坏死
hypovolemia [haɪpəʊvə'lɪmɪə] n.	(循环)血容量减少
cardiac ['ka:dɪæk] a.	心脏(病)的
vasodilatation [væzəʊdələ'teɪʃən] n.	血管舒张
vasoconstriction [væzəʊkən'strɪkʃən] n.	血管收缩
orthostatic [ɔ:θəʊ'stætɪk] a.	直立的
hypotension [haɪpəʊ'tenʃən] n.	血压过低
tachycardia [tækri'ka:dɪə] n.	心动过速
jugular ['dʒʌgjʊlə] a.	颈的,颈静脉的
venous ['vi:nəs] a.	静脉的
turgor ['tɜ:gə] n.	细胞(组织)的膨胀,肿胀
mucous ['mju:kəs] a.	黏液的,分泌黏液的
membrane ['membreɪn] n.	膜
stigma ['stɪgma] ([复]stigmas/stigmata) n.	皮肤上的红斑;特征
sepsis ['sepsɪs] n.	败血症,脓毒症
arterial [a:'tɪəriəl] a.	动脉的
diuretic [daɪəjʊə'retɪk] n.	利尿剂
NSAIDs (non-steroidal anti-inflammatory drugs)	非类固醇消炎药,非甾类消炎药
ACE (angiotensin converting enzyme)	血管紧张素转化酶
inhibitor [ɪn'hɪbɪtə] n.	抑制剂
ARBs (angiotensin receptor blockers)	血管紧张素受体阻断剂
nephrotoxic [nef'rət'ɒksɪk] a.	对肾脏有害的
cardiovascular [ka:dɪə'vesələr] a.	心血管的
intravascular [ɪn'trə'vesəklər] a.	血管内的
incidence [ɪn'sɪdəns] n.	发生率,发病率
cholera ['kɒlərə] n.	霍乱
aminoglycoside [ə'mi:gəʊ'saɪd] n.	氨基糖苷类
cyclosporine [saɪkləʊ'spɔ:rɪn] n.	环孢素
vasodilator [væzəʊdələ'teɪtə] n.	血管扩张剂
renovascular [ri'nəʊ'vesəklər] a.	肾血管(性)的
allopurinol [æləpʊ'renələʊnl] n.	别嘌醇(治痛风药)
alkaline ['ælkəlайн] a.	碱性的
diuresis [daɪəjʊə'ri:sɪs] n.	多尿;利尿



prophylactic [prə'fɪlæktɪk] a.	预防(性)的
urate [ju'reit] n.	尿酸盐
nephropathy [ni'frɒpəθɪ] n.	肾病
hematologic [hɛmətə'lɒdʒɪk] a.	血液学的
malignancy [mæ'lɪgnənsɪ] n.	恶性
tubule ['tju:bju:l] n.	小管, 细管
rasburicase n.	拉布立酶(一种酶类药)
urate oxidase enzyme ['ju'reret 'ɒksɪdaɪz en'zaɪm]	尿酸氧化酶
enzymatic [en'zɪmaɪtɪk] a.	酶性的
metabolite [mɛtə'bɒlɪt] n.	代谢物
allantoin [ə'laɪntəʊɪn] n.	尿囊素
methotrexate [meθə'trekseɪt] n.	甲氨蝶呤(一种抗肿瘤药)
rhabdomyolysis [ræbdə'maɪə'lɪsɪs] n.	横纹肌溶解
N-acetylcysteine	N-乙酰半胱氨酸; 胱氨酸
acetaminophen [ə'si:tə'minəfən] n.	对乙酰氨基酚
loop diuretic [lu:p daɪju:e'retɪk] n.	亨氏环利尿剂, 髓袢利尿剂
mannitol ['mænɪtol] n.	甘露醇
dopamine ['dəʊpə'mi:n] n.	多巴胺
fenoldopam	非诺多泮(一种血管扩张药)
theophylline [θi'filɪ:n] n.	茶碱
sodium bicarbonate [səʊdi:əm baɪ'ka:bənɪt]	碳酸氢钠, 小苏打
radiocontrast nephropathy	造影剂肾病
agonist ['ægənist] n.	主动肌; 兴奋剂, 激动剂
parenteral [pæ'rentərəl] a.	肠胃外的, 非肠道的
antihypertensive ['æntihaɪpə'tensɪv] a. & n.	抗高血压的(药物)
radiographic [reidiəʊ'gra:fɪk] a.	X 线照相的, 放射显影
aminophylline [ə'mi:nəfɪli:n] n.	氨茶碱
adenosine [ə'denəsi:n] n.	腺苷
antagonist [æn'tægənist] n.	拮抗物, 拮抗剂
intravenous [int'revi:nəs] a.	静脉内的
sodium chloride ['səʊdiəm 'klɔ:raɪd]	氯化钠
hemodynamic [hi:məʊdæm'naemɪk] a.	血流动力学的



Exercises

J. Reading Comprehension

A. Answer the following questions.

1. What are the clinical features of acute renal failure?
 2. According to the passage, what may severe or prolonged hypoperfusion lead to?
 3. What physical signs suggest prerenal ARF?
 4. For ischemic or nephrotoxic ARF, why is prevention of paramount importance?
 5. In what condition is prerenal ARF reversible?

B. Choose the right answer to each question.

II. Words and Expressions

A. Fill in the blanks with the words or expressions given below, and change the form where necessary.

nephropathy incidence mortality hypoperfusion hypovolemia
malignancy obstruction serum metabolite intravenous
vasodilator cardiac ischemic necrosis hypertension