## Table of Contents

### Perspectives

- **Bridge to life: cardiac mechanical support**  
  Baughman, K.L., and John A. Jarcho.

- **Regulation of follow-on biologics**  
  Frank, R.G.

- **The battle over SCHIP.**  
  Iglehart, J.K.

- **The rosiglitazone story: lessons from an FDA advisory committee meeting**  
  Rosen, C.J.

- **Sideling safety: the FDA’s inadequate response to the IOM**  
  Smith, S.W.

### Articles

- **Dronedarone for maintenance of sinus rhythm in atrial fibrillation or flutter**  

- **STAT4 and the risk of rheumatoid arthritis and systemic lupus erythematosus**  

- **Efficacy and Safety of Epoetin Alfa in Critically Ill Patients.**  

- **Brief report: luteinizing hormone beta mutation and hypogonadism in men and women**  

- **Minimizing ventricular pacing to reduce atrial fibrillation in sinus-node disease**  
  Michael O. Sweeney, Alan J. Bank, Emmanuel Nsah, Maria Koulick, Qian Cathy Zeng, Douglas Hettrick, Todd Sheldon, Gervasio A. Lamas.

- **Use of a continuous-flow device in patients awaiting heart transplantation**  

- **Reversal of idiopathic hypogonadotropic hypogonadism.**  

- **Saline or albumin for fluid resuscitation in patients with traumatic brain injury**  
  The SAFE Study Investigators.

- **Risk alleles for multiple sclerosis identified by a genomewide study**  
  The International Multiple Sclerosis Genetics Consortium.

### Review Article

- **Mechanisms of anabolic therapies for osteoporosis**  
  Canalis, E., Andrea Giustina, and John P. Bilezikian.

- **Control of neglected tropical diseases**  
  Peter J. Hotez, David H. Molyneux, Alan Fenwick, Jacob Kuma Reneas, Sonia Ehrlich Sachs, Jeffrey D. Sachs, and Lorenzo Savioli.

### Images in Clinical Medicine

- **Oral Acanthosis Nigricans**  
  C. Schnopp and J. Baumstark.

- **Taenia in the gastrointestinal tract**  
  Liao, W.S., and M.J. Bair.

- **Lipemia retinalis associated with secondary hyperlipidemia**  
  M. Morrison-Bryant and J.D. Gradon.

- **Case 27-2007: a 30-year-old pregnant woman with intrauterine fetal death**  
  Ronald S. Gibbs, and Drucilla J. Roberts.

### Clinical Practice

- **Hypertriglyceridemia**  
  Brunzell, J.D.

### Clinical Problem-Solving

- **A stitch in time: a 64-year-old man with a history of coronary artery disease and peripheral vascular disease was admitted to the hospital with a several-month history of fevers, chills, and fatigue.**  
  Christopher J. Graber, Adam S. Lauring, and Peter V. Chin-Hong.
PERSPECTIVES
(Since these articles have no abstract, we just provided an extract of the first 100 words of the full text and any section headings)


Even with well-managed care, many patients with severe heart failure reach a stage at which medical therapy is insufficient to sustain an acceptable level of cardiac function. It is estimated that 0.2% of persons over 45 years of age in the United States, or nearly 200,000 people, may fit this description. Since only approximately 2000 donor hearts are available in the United States each year for transplantation, the need for another approach to cardiac replacement is well established. Investigators and the medical-device industry have been pursuing the development of mechanical cardiac support for more than four decades.


Biopharmaceutical products, with U.S. sales in 2006 amounting to about $40.3 billion, are increasingly central to the treatment of major health problems affecting Americans. Since modern biopharmaceuticals date back to the 1980s, the first generation of such drugs has begun to lose patent protection (see table). In other parts of the world, governments have crafted regulations defining the terms of competition from "imitator," or generic, products. Many analysts have expressed concern that without new U.S. regulations, patent expirations may not be accompanied by the introduction of competing, lower-cost biologic agents — or that imitator products might be approved . . .


Reauthorization of the State Children’s Health Insurance Program (SCHIP), which was considered a routine matter until recently because of the program’s success in expanding coverage to children of the working poor, has become embroiled in a larger struggle over ideologies that divide the political parties. The immediate battle to reauthorize SCHIP, for which the legal mandate expires on September 30, will resume this fall as Democrats, who command the House and Senate by slender margins, seek to stand up to President Bush, who has said he would veto the SCHIP bills approved by the . . .


On July 30, 2007, the Endocrinologic and Metabolic Drugs Advisory Committee and the Drug Safety and Risk Management Advisory Committee of the Food and Drug Administration (FDA) convened to discuss the myocardial ischemic risk associated with rosiglitazone treatment in patients with type 2 diabetes mellitus. The joint committee, which I chaired, consisted of 24 experts in cardiovascular disease, epidemiology, biostatistics, and endocrinology. After lengthy discussions, we concluded that the use of rosiglitazone for the treatment of type 2 diabetes was associated with a greater risk of myocardial ischemic events than placebo, metformin, or sulfonylureas . . .


Having been commissioned by the Food and Drug Administration (FDA) to evaluate the U.S. drug-safety system, the Institute of Medicine (IOM) published a report, The Future of Drug Safety, in September 2006 identifying weaknesses in the laws, regulations, resources, and practice of ensuring drug safety. Some of the IOM’s recommendations were directed toward Congress, which it believed should increase FDA funding and regulatory authority. Some outlined ways in which other federal agencies could work in partnership with the FDA for the public good. But most of the report outlined deficiencies that the
Amiodarone is effective in maintaining sinus rhythm in atrial fibrillation but is associated with potentially serious toxic effects. Dronedarone is a new antiarrhythmic agent pharmacologically related to amiodarone but developed to reduce the risk of side effects. In two identical multicenter, double-blind, randomized trials, one conducted in Europe (ClinicalTrials.gov number, NCT00259428 [ClinicalTrials.gov]) and one conducted in the United States, Canada, Australia, South Africa, and Argentina (termed the non-European trial, NCT00259376 [ClinicalTrials.gov]), we evaluated the efficacy of dronedarone, with 828 patients receiving 400 mg of the drug twice daily and 409 patients receiving placebo. Rhythm was monitored transtelephonically on days 2, 3, and 5; at 3, 5, 7, and 10 months; during recurrence of arrhythmia; and at nine scheduled visits during a 12-month period. The primary end point was the time to the first recurrence of atrial fibrillation or flutter. In the European trial, the median times to the recurrence of arrhythmia were 41 days in the placebo group and 96 days in the dronedarone group (P=0.01). The corresponding durations in the non-European trial were 59 and 158 days (P=0.002). At the recurrence of arrhythmia in the European trial, the mean (±SD) ventricular rate was 117.5±29.1 beats per minute in the placebo group and 102.3±24.7 beats per minute in the dronedarone group (P<0.001); the corresponding rates in the non-European trial were 116.6±31.9 and 104.6±27.1 beats per minute (P<0.001). Rates of pulmonary toxic effects and of thyroid and liver dysfunction were not significantly increased in the dronedarone group. Dronedarone was significantly more effective than placebo in maintaining sinus rhythm and in reducing the ventricular rate during recurrence of arrhythmia.

Rheumatoid arthritis is a chronic inflammatory disease with a substantial genetic component. Susceptibility to disease has been linked with a region on chromosome 2q. We tested single-nucleotide polymorphisms (SNPs) in and around 13 candidate genes within the previously linked chromosome 2q region for association with rheumatoid arthritis. We then performed fine mapping of the STAT1–STAT4 region in a total of 1620 case patients with established rheumatoid arthritis and 2635 controls, all from North America. Implicated SNPs were further tested in an independent case–control series of 1529 patients with early rheumatoid arthritis and 881 controls, all from Sweden, and in a total of 1039 case patients and 1248 controls from three series of patients with systemic lupus erythematosus. A SNP haplotype in the third intron of STAT4 was associated with susceptibility to both rheumatoid arthritis and systemic lupus erythematosus. The minor alleles of the haplotype-defining SNPs were present in 27% of chromosomes of patients with established rheumatoid arthritis, as compared with 22% of those of controls (for the SNP rs7574865, P=2.81x10−7; odds ratio for having the risk allele in chromosomes of patients vs. those of controls, 1.32). The association was replicated in Swedish patients with recent-onset rheumatoid arthritis (P=0.02) and matched controls. The haplotype marked by rs7574865 was strongly associated with lupus, being present on 31% of chromosomes of case patients and 22% of those of controls (P=1.87x10−9; odds ratio for having the risk allele in chromosomes of patients vs. those of controls, 1.55). Homozygosity of the risk allele, as compared with absence of the allele, was associated with a more than doubled risk for lupus and a 60% increased risk for rheumatoid arthritis. A haplotype of STAT4 is associated with increased risk for both rheumatoid arthritis and systemic lupus erythematosus, suggesting a shared pathway for these illnesses.
Anemia, which is common in the critically ill, is often treated with red-cell transfusions, which are associated with poor clinical outcomes. We hypothesized that therapy with recombinant human erythropoietin (epoetin alfa) might reduce the need for red-cell transfusions. In this prospective, randomized, placebo-controlled trial, we enrolled 1460 medical, surgical, or trauma patients between 48 and 96 hours after admission to the intensive care unit. Epoetin alfa (40,000 U) or placebo was administered weekly, for a maximum of 3 weeks; patients were followed for 140 days. The primary end point was the percentage of patients who received a red-cell transfusion. Secondary end points were the number of red-cell units transfused, mortality, and the change in hemoglobin concentration from baseline. As compared with the use of placebo, epoetin alfa therapy did not result in a decrease in either the number of patients who received a red-cell transfusion (relative risk for the epoetin alfa group vs. the placebo group, 0.95; 95% confidence interval [CI], 0.85 to 1.06) or the mean (±SD) number of red-cell units transfused (4.5±4.6 units in the epoetin alfa group and 4.3±4.8 units in the placebo group, P=0.42). However, the hemoglobin concentration at day 29 increased more in the epoetin alfa group than in the placebo group (1.6±2.0 g per deciliter vs. 1.2±1.8 g per deciliter, P<0.001). Mortality tended to be lower at day 29 among patients receiving epoetin alfa (adjusted hazard ratio, 0.79; 95% CI, 0.56 to 1.10); this effect was also seen in prespecified analyses in those with a diagnosis of trauma (adjusted hazard ratio, 0.37; 95% CI, 0.19 to 0.72). A similar pattern was seen at day 140 (adjusted hazard ratio, 0.86; 95% CI, 0.65 to 1.13), particularly in those with trauma (adjusted hazard ratio, 0.40; 95% CI, 0.23 to 0.69). As compared with placebo, epoetin alfa was associated with a significant increase in the incidence of thrombotic events (hazard ratio, 1.41; 95% CI, 1.06 to 1.86). The use of epoetin alfa does not reduce the incidence of red-cell transfusion among critically ill patients, but it may reduce mortality in patients with trauma. Treatment with epoetin alfa is associated with an increase in the incidence of thrombotic events.

Selective luteinizing hormone deficiency due to mutations in the luteinizing hormone beta-subunit gene (LHB) is a rare cause of hypogonadism. We describe the clinical features of a consanguineous family in which three siblings, two men and one woman, had hypogonadism related to isolated luteinizing hormone deficiency. These subjects have a newly discovered homozygous mutation of a 5′ splice site in LHB: IVS2+1G. This mutation disrupts the splicing of messenger RNA (mRNA), generating a gross abnormality in the processing of the luteinizing hormone beta-subunit mRNA, which abrogates the secretion of luteinizing hormone. We also determined that the female phenotype of this LHB mutation is characterized by normal pubertal development, secondary amenorrhea, and infertility.

Conventional dual-chamber pacing maintains atrioventricular synchrony but results in high percentages of ventricular pacing, which causes ventricular desynchronization and has been linked to an increased risk of atrial fibrillation in patients with sinus-node disease. We randomly assigned 1065 patients with sinus-node disease, intact atrioventricular conduction, and a normal QRS interval to receive conventional dual-chamber pacing (535 patients) or dual-chamber minimal ventricular pacing with the use of new pacemaker features designed to promote atrioventricular conduction, preserve ventricular conduction, and prevent ventricular desynchronization (530 patients). The primary end point was time to persistent atrial fibrillation. The mean (±SD) follow-up period was 1.7±1.0 years when the trial was stopped because it had met the primary end point. The median percentage of ventricular beats that were paced was lower in dual-chamber minimal ventricular pacing than in conventional dual-chamber pacing (9.1% vs. 99.0%, P<0.001), whereas the percentage of atrial beats that were paced was similar in the two groups (71.4% vs.


Persistent atrial fibrillation developed in 110 patients (68.3%) in the group assigned to conventional dual-chamber pacing and 42 (12.7%) in the group assigned to dual-chamber minimal ventricular pacing. The hazard ratio for development of persistent atrial fibrillation in patients with dual-chamber minimal ventricular pacing as compared with those with conventional dual-chamber pacing was 0.60 (95% confidence interval, 0.41 to 0.88; *P*=0.009), indicating a 40% reduction in relative risk. The absolute reduction in risk was 4.8%. The mortality rate was similar in the two groups (4.9% in the group receiving dual-chamber minimal ventricular pacing vs. 5.4% in the group receiving conventional dual-chamber pacing, *P*=0.54). Dual-chamber minimal ventricular pacing, as compared with conventional dual-chamber pacing, prevents ventricular desynchronization and moderately reduces the risk of persistent atrial fibrillation in patients with sinus-node disease.


The use of left ventricular assist devices is an accepted therapy for patients with refractory heart failure, but current pulsatile volume-displacement devices have limitations (including large pump size and limited long-term mechanical durability) that have reduced widespread adoption of this technology. Continuous-flow pumps are newer types of left ventricular assist devices developed to overcome some of these limitations. In a prospective, multicenter study without a concurrent control group, 133 patients with end-stage heart failure who were on a waiting list for heart transplantation underwent implantation of a continuous-flow pump. The principal outcomes were the proportions of patients who, at 180 days, had undergone transplantation, had cardiac recovery, or had ongoing mechanical support while remaining eligible for transplantation. We also assessed functional status and quality of life. The principal outcomes occurred in 100 patients (75%). The median duration of support was 126 days (range, 1 to 600). The survival rate during support was 75% at 6 months and 68% at 12 months. At 3 months, therapy was associated with significant improvement in functional status (according to the New York Heart Association class and results of a 6-minute walk test) and in quality of life (according to the Minnesota Living with Heart Failure and Kansas City Cardiomyopathy questionnaires). Major adverse events included postoperative bleeding, stroke, right heart failure, and percutaneous lead infection. Pump thrombosis occurred in two patients. A continuous-flow left ventricular assist device can provide effective hemodynamic support for a period of at least 6 months in patients awaiting heart transplantation, with improved functional status and quality of life.


Idiopathic hypogonadotropic hypogonadism, which may be associated with anosmia (the Kallmann syndrome) or with a normal sense of smell, is a treatable form of male infertility caused by a congenital defect in the secretion or action of gonadotropin-releasing hormone (GnRH). Patients have absent or incomplete sexual maturation by the age of 18. Idiopathic hypogonadotropic hypogonadism was previously thought to require lifelong therapy. We describe 15 men in whom reversal of idiopathic hypogonadotropic hypogonadism was sustained after discontinuation of hormonal therapy. We defined the sustained reversal of idiopathic hypogonadotropic hypogonadism as the presence of normal adult testosterone levels after hormonal therapy was discontinued. Results Ten sustained reversals were identified retrospectively. Five sustained reversals were identified prospectively among 50 men with idiopathic hypogonadotropic hypogonadism after a mean (±SD) duration of treatment interruption of 6±3 weeks. Of the 15 men who had a sustained reversal, 4 had anosmia. At initial evaluation, 6 men had absent puberty, 9 had partial puberty, and all had abnormal secretion of GnRH-induced luteinizing hormone. All 15 men had received previous hormonal therapy to induce virilization, fertility, or both. Among those whose hypogonadism was reversed, the mean serum level of endogenous testosterone increased from 55±29 ng per deciliter (1.9±1.0 nmol per liter) to 386±91 ng per deciliter (13.4±3.2 nmol per liter; *P*<0.001), the luteinizing hormone level increased from 2.7±2.0 to 8.5±4.6 IU per liter (P<0.001), the level of follicle-stimulating hormone increased from 2.5±1.7 to 9.5±12.2 IU per liter (P<0.001), and testicular volume increased from 8±5 to 16±7 ml (P<0.001). Pulsatile luteinizing hormone secretion and spermatogenesis were
documented. Sustained reversal of normosmic idiopathic hypogonadotropic hypogonadism and the Kallmann syndrome was noted after discontinuation of treatment in about 10% of patients with either absent or partial puberty. Therefore, brief discontinuation of hormonal therapy to assess reversibility of hypogonadotropic hypogonadism is reasonable.


The Saline versus Albumin Fluid Evaluation study suggested that patients with traumatic brain injury resuscitated with albumin had a higher mortality rate than those resuscitated with saline. We conducted a post hoc follow-up study of patients with traumatic brain injury who were enrolled in the study. For patients with traumatic brain injury (i.e., a history of trauma, evidence of head trauma on a computed tomographic [CT] on the Glasgow Coma Scale [GCS]), we recorded baseline characteristics from case-report forms, clinical records, and CT scans and determined vital status and functional neurologic outcomes 24 months after randomization. We followed 460 patients, of whom 231 (50.2%) received albumin and 229 (49.8%) received saline. The subgroup of patients with GCS scores of 3 to 8 were classified as having severe brain injury (160 [69.3%] in the albumin group and 158 [69.0%] in the saline group). Demographic characteristics and indexes of severity of brain injury were similar at baseline. At 24 months, 71 of 214 patients in the albumin group (33.2%) had died, as compared with 42 of 206 in the saline group (20.4%) (relative risk, 1.63; 95% confidence interval [CI], 1.17 to 2.26; P=0.003). Among patients with severe brain injury, 61 of 146 patients in the albumin group (41.8%) died, as compared with 32 of 144 in the saline group (22.2%) (relative risk, 1.88; 95% CI, 1.31 to 2.70; P<0.001); among patients with GCS scores of 9 to 12, death occurred in 8 of 50 patients in the albumin group (16.0%) and 8 of 37 in the saline group (21.6%) (relative risk, 0.74; 95% CI, 0.31 to 1.79; P=0.50). In this post hoc study of critically ill patients with traumatic brain injury, fluid resuscitation with albumin was associated with higher mortality rates than was resuscitation with saline.


Multiple sclerosis has a clinically significant heritable component. We conducted a genomewide association study to identify alleles associated with the risk of multiple sclerosis. We used DNA microarray technology to identify common DNA sequence variants in 931 family trios (consisting of an affected child and both parents) and tested them for association. For replication, we genotyped another 609 family trios, 2322 case subjects, and 789 control subjects and used genotyping data from two external control data sets. A joint analysis of data from 12,360 subjects was performed to estimate the overall significance and effect size of associations between alleles and the risk of multiple sclerosis. A transmission disequilibrium test of 334,923 single-nucleotide polymorphisms (SNPs) in 931 family trios revealed 49 SNPs having an association with multiple sclerosis (P<1x10−4); of these SNPs, 38 were selected for the second-stage analysis. A comparison between the 931 case subjects from the family trios and 2431 control subjects identified an additional nonoverlapping 32 SNPs (P<0.001). An additional 40 SNPs with less stringent P values (<0.01) were also selected, for a total of 110 SNPs for the second-stage analysis. Of these SNPs, two within(IL2RA) were strongly associated with multiple sclerosis (P=2.96x10−8), as were a nonsynonymous SNP in the interleukin-7 receptor (IL7RA) (P=2.94x10−7) and multiple SNPs in the HLA-DRA locus (P=8.94x10−81). Alleles of IL2RA and IL7RA and those in the HLA locus are identified as heritable risk factors for multiple sclerosis.

REVIEW ARTICLE


Osteoporosis, a major worldwide health problem, affects 4 million to 6 million women and 1 million to 2 million men in the United States. Even more people have decreased bone mass, which, in addition to other risk factors, can be a major therapeutic challenge.1 Fractures, the most important consequence of osteoporosis, are associated with enormous costs and substantial morbidity and mortality. The prevention and treatment of this disease are therefore of paramount importance. Since postmenopausal osteoporosis is characterized by bone resorption that exceeds bone formation, antiresorptive agents can help to restore skeletal balance by . . .

The neglected tropical diseases are a group of 13 major disabling conditions that are among the most common chronic infections in the world’s poorest people. A blueprint for the control or elimination of the seven most prevalent neglected tropical diseases — ascariasis, trichuriasis, hookworm infection, schistosomiasis, lymphatic filariasis, trachoma, and onchocerciasis — has been established by a group of private, public, and international organizations working together with pharmaceutical partners and national ministries of health. Through the newly established Global Network for Neglected Tropical Diseases, with updated guidelines for drug administration issued by the World Health Organization (WHO), partnerships are coordinating . . .

IMAGES IN CLINICAL MEDICINE


A 44-year-old woman presented with increasing oral papillomatosis, predominantly on the lips and less pronounced on the tongue and buccal mucosa. The lips showed filiform papillomas in a symmetrical distribution (Panel A). The tongue was thickened and furrowed. A biopsy was performed, and histologic analysis revealed acanthosis and papillomatosis, hyperkeratosis, increased dermal pigmentation, and a dermal lymphohistiocytic infiltrate (Panel B and inset, arrows). No epidermal inclusion bodies were seen, and polymerase-chain-reaction analysis of the specimen did not detect any human papillomavirus DNA . . .


A healthy 60-year-old woman presented with hematemesis and melena, which she had had for 1 day. Her physical examination was unremarkable, as were the results of routine blood tests. On upper gastrointestinal endoscopy, a tapeworm was seen, along with multiple erosions and active bleeding from ulcers in the stomach and duodenum. She did not use nonsteroidal antiinflammatory drugs, and Helicobacter pylori was not found. After treatment with praziquantel and a proton-pump inhibitor, the bleeding resolved. One year later, she presented with intermittent epigastric pain, which she reported having had for several months. Again, a tapeworm was seen on upper gastroduodenal . . .

Figure: No caption available.


A 46-year-old woman with metastatic sarcoma who had been treated with five cycles of doxorubicin, ifosfamide, and mesna chemotherapy presented with two symmetrical, horizontal white lines on all of her fingernails but not on her toenails. A diagnosis of Muehrcke’s lines was made. Muehrcke’s lines are the two smooth white bands that run parallel to the lunula across the width of the nail. The lines are nonpalpable and, unlike Beau’s lines, do not indent the nail itself. Normal-appearing pink nail-bed tissue is seen between the two white lines, and thumb involvement is rare. Muehrcke’s lines are a nonspecific finding that . . .


A 26-year-old man with a 6-month history of type 1 diabetes mellitus presented with weight loss and poor glycemic control. Physical examination revealed no xanthomas; all vessels in the posterior pole and peripheral area of each eye had a creamy appearance (Panels A and B). The patient had no problems with his vision. Laboratory studies showed a fasting blood glucose level of 261 mg per deciliter (14.5 mmol per liter; normal range, 60 to 120 mg per deciliter [3.3 to 6.7 mmol per liter]), a total serum cholesterol level of 1086 mg per deciliter (28.1 mmol per liter; normal range, . . .


A 30-year-old primigravida was admitted to the hospital in active spontaneous labor at 39.7 weeks’ gestation. The patient had received prenatal care at this hospital since 11.1 weeks’ gestation. She had been well. She had had varicella and had received bacille Calmette–Guérin (BCG) vaccine as a child. Four years earlier, a tuberculin skin test had been positive, and a chest radiograph had been negative; she
had received antituberculosis medication for 6 months. There was no history of sexually transmitted diseases, and she did not smoke cigarettes, drink alcohol, or use intravenous drugs. She was born and raised in . . .

CLINICAL PRACTICE


This Journal feature begins with a case vignette highlighting a common clinical problem. Evidence supporting various strategies is then presented, followed by a review of formal guidelines, when they exist. The article ends with the author’s clinical recommendations. A healthy 45-year-old man is found on routine screening to have hypertriglyceridemia. He is a nonsmoker, has a reasonable diet, consumes one alcoholic drink per week, and exercises regularly. He takes no medications. His father died at the age of 55 years in an automobile accident; his mother is healthy at 67 years of age, and he has two healthy older brothers. . . .

CLINICAL PROBLEM-SOLVING

Christopher J. Graber, Adam S. Lauring, and Peter V. Chin-Hong. (2007). A stitch in time: a 64-year-old man with a history of coronary artery disease and peripheral vascular disease was admitted to the hospital with a several-month history of fevers, chills, and fatigue. *New England Journal of Medicine, 357* (10), 1029-1034..

In this Journal feature, information about a real patient is presented in stages (boldface type) to an expert clinician, who responds to the information, sharing his or her reasoning with the reader (regular type). The authors’ commentary follows. A 64-year-old man with a history of coronary artery disease and peripheral vascular disease was admitted to the hospital with a several-month history of fevers, chills, and fatigue. These symptoms had begun soon after he had undergone percutaneous coronary intervention with placement of a stent in the left anterior descending coronary artery 10 months previously. He had initially been treated empirically . . .

*Figure: Magnetic Resonance Angiogram Showing the Close Association between the Aortic Graft and the Terminal Duodenum (Arrow).*