Liver Disease in Children, Frederick J. Suchy, Ronald J. Sokol, William F. Balistreri, Cambridge University Press, 2007, 1139464035, 9781139464031, 1030 pages. Completely revised new edition of the premier reference on pediatric liver disease. Liver Disease in Children, 3rd Edition provides authoritative coverage of every aspect of liver disease affecting infants, children, and adolescents. Chapters are written by international experts and address the unique pathophysiology, manifestations, and management of these disorders in the pediatric population. The third edition has been thoroughly updated and features new contributions on liver development, cholestatic and autoimmune disorders, fatty liver disease, and inborn errors of metabolism. An essential resource for all physicians involved in the care of children with liver disease.

Neurology of the Newborn, Volume 899, Joseph J. Volpe, 2008, Medical, 1094 pages. The 5th edition of this indispensable resource captures the latest insights in neonatal neurology in a totally engaging, readable manner. World authority Dr. Joseph Volpe has ....

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Oxford Textbook of Clinical Hepatology, Johannes Bircher, Jean-Pierre Benhamou, Neil McIntyre, Mario Rizzetto, Juan Rodes, 1999, Medical, The Oxford Textbook of Hepatology covers the liver and biliary system from basic science to clinical practice and is intended to inform clinicians comprehensively and be up-to ....

Paediatric hepatology, Stuart Tanner, 1989, Medical, 363 pages. 

Liver disease diagnosis and management, Bruce R. Bacon, Adrian M. Di Bisceglie, 2000, Medical, 481 pages. Edited by two internationally known and respected hepatologists, this new resource examines the important concepts, principles, and facts needed for the daily care and ....

Diseases of the Liver and Biliary System in Children, Deirdre Kelly, Jan 26, 2009, Medical, 640 pages. An excellent up-to-date comprehensive and practical text book dealing with all aspects of paediatric hepatobiliary disease. It will be useful to both generalists and ....

Medical Care of the Liver Transplant Patient Total Pre-, Intra- and Post-Operative Management, Paul G Killenberg, MD, Pierre-Alain Clavien, Apr 15, 2008, Medical, 612 pages. Medical Care of the Liver Transplant Patient looks at monitoring and maintaining the health of organ recipients and donors, pre, during and post-operatively. There are twenty ....

Inborn Metabolic Diseases Diagnosis and Treatment, Georges Van den Berghe, Nov 16, 2011, Electronic books, 684 pages. Being up to Date: Status Quo and Trends of TreatmentFor those involved in the identification and management of patients with inborn errors of metabolism, this book is now ....

 Pediatric Gastrointestinal Disease: Pathophysiology, Diagnosis ..., Volume 1 Pathophysiology, Diagnosis, Management, W. Allan Walker, 2004, Medical, 2195 pages. This new edition of Pediatric Gastrointestinal Disease is dedicated to the maintenance of a comprehensive approach to the practice of Pediatric Gastroenterology. Considered to ....
Completely revised new edition of the premier reference on pediatric liver disease. Liver Disease in Children, 3rd Edition provides authoritative coverage of every aspect of liver disease affecting infants, children, and adolescents. Chapters are written by international experts and address the unique pathophysiology, manifestations, and management of these disorders in the pediatric population. The third edition has been thoroughly updated and features new contributions on liver development, cholestatic and autoimmune disorders, fatty liver disease, and inborn errors of metabolism. An essential resource for all physicians involved in the care of children with liver disease.

"The book admirably covers a vast amount of hepatology...The collection of color plates in the center of the book is a highlight...Since the publication of the first edition of Liver Disease in Children, it has been one of the core textbooks of pediatric hepatology. The third edition is up-to-date and has incorporated large amounts of new information. Once again, it is the essential pediatric hepatology textbook." New England Journal of Medicine

"The chapters on cystic fibrosis, Alagille syndrome, viral hepatitis, medical and nutritional management of the infant with cholestasis and drug induced liver disease are particularly well written and easy to read...an excellent selection of color plates on a diverse number of topics...generally well illustrated throughout."

"Well written and organized...The text is supplemented with well-conceived tables, figures, graphs, and, new to this edition, color plates that greatly facilitate understanding of the information presented. As with its previous iterations, the third edition of Liver Disease in Children builds on a strong scientific foundation and effectively bridges pathophysiologic principles with clinical practice, providing authoritative updated reviews on all topics relevant to the discipline. The textbook is the premier reference in the field and should be truly enjoyed by primary care practitioners, gastroenterologists, hepatologists, and anyone genuinely interested in the care of children with liver disease."

Great liver text. This was recommended to me by the director of transplant hepatology at my institution. Very readable. Extensive discussions of epidemiology/etiology and heavily referenced throughout, perhaps too much so at points, describing theories that came and went and why, which aren't very clinically relevant (i.e. chapter on neonatal jaundice has 598 references, viral hepatitis has 606 references!!). Still, from a clinical standpoint there is great discussion of progression of lab values with disease progression or expected changes with treatment, varied presentations with different ages, therapeutic options, and so on. Nice color plates and images throughout. Probably a must-own for a peds GI fellow.


The fourth edition of this authoritative text covers every aspect of liver disease affecting infants, children and adolescents. As in the previous editions, it offers an integrative approach to the science and clinical practice of pediatric hepatology and charts the substantial progress in understanding and treating these diseases. All of the chapters are written by international experts and address the
unique pathophysiology, manifestations and management of these disorders. This edition of the landmark text features extended coverage of viral hepatitis, metabolic liver disease, fatty liver disease and liver transplantation, including a new chapter on post-transplant care and outcomes. All of the chapters have been updated to reflect changing epidemiology and recent advances in molecular medicine and genomics. With the continued evolution of pediatric hepatology as a discipline, this text remains an essential reference for all physicians involved in the care of children with liver disease.


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abnormalities activity acute adults Alagille syndrome aminotransferase antibody antigen ascites associated autoimmune bile acid bile duct biliary atresia bilirubin biochemical blood cells cholestasis cholestatic cholesterol chronic hepatitis chronic liver disease cirrhosis Clin clinical congenital conjugated cyst cystic decreased de"acyracy decreased de"acyracy detected diagnosis disorders dose drug ef"acy elevated Engl enzyme excretion extrahepatic factors fetal id"acion id"acion id"rsg ow ow uid function gallbladder gallstones Gastroenterology gene Genet HBeAg HBsAg HBV infection hemorrhage hepatic encephalopathy hepatocytes Hepatol Hepatology hepatotoxicity histologic hyperbilirubinemia identi"ed immune increased infants intrahepatic bile ducts intrahepatic cholestasis jaundice lesions levels liver biopsy liver disease liver failure liver transplantation membrane metabolism mutations necrosis neonatal hepatitis normal patients Pediatr Pediatr Gastroenterol Nutr Pediatr Surg plasma portal hypertension primary sclerosing cholangitis protein pruritus renal reported result risk serum bilirubin signii"cant specii"c therapy tion tissue toxic treatment UDCA vaccine variceal viral vitamin

The liver is derived from the endoderm, one of the three germ layers formed during gastrulation. The initial endodermal epithelium consists of approximately 500 cells in the mouse [1], from which cells will be apportioned to the thyroid, lung, stomach, liver, pancreas, esophagus, and intestines. How is the endoderm patterned to generate such diverse tissues? Once the hepatic primordium is formed, how are the different hepatic cell types generated? How do they generate a proper liver architecture? And how do the principles of liver development apply to liver regeneration and the possibility of generating hepatocytes from stem cells? This chapter focuses on all of these questions.

By late gastrulation in the mouse (embryonic day of gestation 7.5 [E7.5]) the anteroposterior pattern of the endoderm is already established[2], so that during E8.5â€“9.5 (mouse) the anterior-ventral domain develops the organ buds for the liver, lung, thyroid, and the ventral rudiment of the pancreas [3]. This corresponds to about 2â€“3 weeksâ€™ gestation in humans. The specification of liver progenitors occurs through a combination of positive inductive signals from the cardiogenic mesoderm and septum transversum mesenchyme and repressive signals from the trunk mesoderm [4â€“6]. This occurs at about 8.5 days gestation in the mouse, when the embryo contains six to seven pairs of somites, which are clusters of skeletal and muscle progenitors. The cells adopting the hepatic fate are characterized by the expression of two of the liver-specific markers, albumin and Î±-fetoprotein (AFP). Although albumin was initially considered to be an adult liver marker, it is now well established that it is among the earliest liver-specific markers to be expressed in development, along with AFP. The nascent hepatic epithelium, consisting of hepatoblasts, then invades a stromal cell field containing angioblasts, which are precursors to the blood vessels, and the septum transversum mesenchyme. Under the influence of the stromal cells, the hepatoblasts proliferate to form the liver bud, and then differentiate to form the fetal liver.
At E10–11 in the mouse, hematopoietic stem cells originating from the yolk sac and aorta-gonad-mesonephros regions colonize the fetal liver and expand their mass and lineage diversity. Therefore, the fetal liver in mammals is a primary site of hematopoiesis. At the same time, the resident hematopoietic cells secrete growth signals that promote maturation of the liver [7–10]. Around birth, hematopoietic cells migrate out of the liver and a functional switch from a hematopoietic microenvironment to a metabolic organ occurs.

A recent study investigated in detail which populations of undifferentiated endoderm cells generate the embryonic liver bud [11]. The authors isolated mouse embryos at E8.0, which is prior to hepatic specification, and used vital dyes to label different clusters of endoderm cells in different isolated embryos. They then cultured the embryos whole, into the organogenic phase, and then determined which tissues inherited the labeled cells. By comparing the descendant cell populations arising from different labeled endoderm cell domains in different embryos, they were able to develop a fate map. The fate map (Figure 1.1) indicates the location of progenitor domains in the undifferentiated endoderm that will give rise to the embryonic liver bud. Interestingly, the authors found that two distinct types of endoderm-progenitor cells, lateral and medial, arising from three spatially separated embryonic domains, generate the epithelial cells of the liver bud (see Figure 1.1). The movement of these cells and the morphologic changes in the embryo during this period position the distinct progenitor domains close to the hepatic-inducing tissues. Although both lateral and medial liver bud descendants express early hepatoblast genes in common, it remains to be determined if the different progenitor domains give rise to functionally different cell populations in the adult liver.

To be induced to a liver fate, the ventral endoderm has to interact with other tissues. An early finding was that the ventral endoderm has to be in close contact with cardiac mesoderm (Figure 1.1), as first shown by transplant experiments with chick embryos [4,6,12]. This is consistent with the morphologic changes that occur during this time of embryo development. At the five- and seven-somite stages, the future hepatic part is brought in close proximity to the cardiac mesoderm through invagination of the foregut. Although the cardiac mesoderm is necessary for the induction of the hepatic fate, it is not sufficient. Further studies showed that the endoderm needs a second stimulus from the septum transversum mesenchyme [13–15] (Figure 1.1). Results in the chicken were confirmed in the mouse [5,16], suggesting a general mechanism of liver development in higher vertebrates. Although these pure morphologic studies showed clearly the importance of both cardiac mesoderm and septum transversum mesenchyme for liver development, they left open the question of what signals are produced by these tissues to facilitate hepatic lineage commitment.

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