

17 Paediatric surgery

- [ENVIRONMENT](#)
- [Introduction](#)
- [Learning objectives](#)

ENVIRONMENT

ENVIRONMENT

Children, especially infants, should be managed in a warm environment. Compared with adults, children lose more heat and fluid with surface area to weight ratios being higher; - Table

Outline the presentation, resuscitation and operation for • pyloric stenosis Outline causes and management of abdominal pain in • children of different ages Describe two solid abdominal tumours of childhood • TABLE 17.1 Some examples of differences between infants and older children Facts Infants and some young children have a wide abdomen, a broad costal margin and a shallow pelvis The edge of the liver comes below the costal margin, and the bladder is partly intra-abdominal The ribs are more horizontal and are flexible The umbilicus is relatively low lying Implications Transverse supraumbilical incisions can give greater access than vertical midline incisions Abdominal trauma (including surgical incisions) can easily damage the liver or bladder The geometry of the ribs means that ventilation requires more diaphragmatic movement than in adults A stoma in the lower abdomen of an infant must be carefully sited for its bag not to interfere with the umbilicus Costal margin Umbilicus Pubic symphysis Infant Adolescent (width > height) (height > width) Figure 17.1 Topographical differences in the abdomen.

ENVIRONMENT

Children, especially infants, should be managed in a warm environment. Compared with adults, children lose more heat and fluid with surface area to weight ratios being higher; - Table

Outline the presentation, resuscitation and operation for • pyloric stenosis Outline causes and management of abdominal pain in • children of different ages Describe two solid abdominal tumours of childhood • TABLE 17.1 Some examples of differences between infants and older children Facts Infants and some young children have a wide abdomen, a broad costal margin and a shallow pelvis The edge of the liver comes below the costal margin, and the bladder is partly intra-abdominal The ribs are more horizontal and are flexible The umbilicus is relatively low lying Implications Transverse supraumbilical incisions can give greater access than vertical midline incisions Abdominal trauma (including surgical incisions) can easily damage the liver or bladder The geometry of the ribs means that ventilation requires more diaphragmatic movement than in adults A stoma in the lower abdomen of an infant must be carefully sited for its bag not to interfere with the umbilicus Costal margin Umbilicus Pubic symphysis Infant Adolescent (width > height) (height > width) Figure 17.1 Topographical differences in the abdomen.

ENVIRONMENT

Children, especially infants, should be managed in a warm environment. Compared with adults, children lose more heat and fluid with surface area to weight ratios being higher; - Table

Outline the presentation, resuscitation and operation for • pyloric stenosis Outline causes and management of abdominal pain in • children of different ages Describe two solid abdominal tumours of childhood • TABLE 17.1 Some examples of differences between infants and older children Facts Infants and some young children have a wide abdomen, a broad costal margin and a shallow pelvis The edge of the liver comes below the costal margin, and the bladder is partly intra-abdominal The ribs are more horizontal and are flexible The umbilicus is relatively low lying Implications Transverse supraumbilical incisions can give greater access than vertical midline incisions Abdominal trauma (including surgical incisions) can easily damage the liver or bladder The geometry of the ribs means that ventilation requires more diaphragmatic movement than in adults A stoma in the lower abdomen of an infant must be carefully sited for its bag not to interfere with the umbilicus Costal margin Umbilicus Pubic symphysis Infant Adolescent (width > height) (height > width) Figure 17.1 Topographical differences in the abdomen.

Introduction

INTRODUCTION

In high-income countries paediatric surgeons have subspecialised, whereas in low-income countries surgeons must maintain diverse skills and knowledge. Some conditions, previously managed by paediatric surgeons, are now managed by others (e.g. clefts in plastic surgery, syndactyly in hand surgery, spina bifida and ventriculoperitoneal shunts in neurosurgery, ligation of patent ductus arteriosus in cardiac surgery and cervical cystic hygromas, thyroglossal cysts, preauricular sinuses and branchial remnants in ear, nose and throat surgery). This new edition recognises specialisation with chapters devoted to neonatal surgery, specialist paediatric urology and paediatric trauma. Those managing the general surgery of childhood in non-specialist hospitals should study the inguinoscrotal conditions described here and the foreskin as outlined in Chapter 20. AGE Biological domains (e.g. physiology, pathology, pharmacology) change continuously with age, whereas hospital services recognise artificial boundaries often set at 12, 16 or 18. The terminology related to children and young people (CYP) includes neonate (<4 weeks) and infant (<1 year). The World Health Organization defines adolescence as ages 10–19 and young people as 10–24. Some anatomical differences between infants and older children appear in 17.1 and Figure 17.1. A few conditions described in Chapter 18 require management throughout childhood and later after handover in transitioning by adult surgeons.

Learning objectives

Learning objectives

After studying this chapter, you will be able to: Outline subspecialisations within children's surgery

- Safely prescribe perioperative fluids in children
- Compare and contrast inguinal hernias and hydroceles
- Discuss the causes and management of the acute • scrotum

After studying this chapter, you will be able to: Outline subspecialisations within children's surgery

- Safely prescribe perioperative fluids in children
- Compare and contrast inguinal hernias and hydroceles
- Discuss the causes and management of the acute • scrotum

After studying this chapter, you will be able to: Outline subspecialisations within children's surgery

- Safely prescribe perioperative fluids in children
- Compare and contrast inguinal hernias and hydroceles
- Discuss the causes and management of the acute • scrotum