Specific types of infections

Necrotizing enterocolitis

A serious illness increases with increasing prematurity and it is typically seen in the first few weeks of life. The bowel of the preterm infant is vulnerable to ischemic injury and bacterial invasion .cow's milk formula is a risk factor. Supplementing milk feeds with prebiotics and probiotics may also be beneficial. Presented as feeding intolerance, vomiting, which may be bile stained. The abdomen becomes distended, stool sometimes contains fresh blood. The infant may rapidly become shocked and require mechanical ventilation because of abdominal distension and pain. It has the characteristic X-ray findings (air under diaphragm, air in portal tract, distended bowel loop ,intramural air) .

Treatment

Stop oral feeding and give broad-spectrum antibiotics to cover both aerobic and anaerobic organisms.

Parenteral nutrition is always needed and mechanical ventilation , circulatory support. Surgery is performed for bowel perforation.

Outcome

The disease has significant morbidity ,a mortality of about 20%. Long-term sequelae include:

the development of strictures and malabsorption if extensive bowel resection has been necessary

greater risk of a poor neurodevelopmental outcome.

Common Focal Infections

Conjunctivitis (Ophthalmia Neonatorum)

Etiology:

Chemical conjunctivitis

Neisseria gonorrhea

Chlamydia trachomatis

Other common pathogens are:-

Staph. aureus., Strept. Pneumonia , Herpes

Chemical Conjunctivitis

Typically presents immediately with thin watery discharge.

Usually secondary to use of silver nitrate but can occur with erythromycin or tetracycline ointments.Povidone - iodine 2.5% ophthalmic solution may be ideal prophylaxis.

Neisseria gonorrhea

Complications: corneal perforation, septic arthritis, sepsis, meningitis

Treatment:

Ceftriaxone 25-50mg/kg x one or 14 days if disseminated infection. (or Penicillin IV).

Irrigation with saline sol.

Penicillin eye drops

Chlamydia trachomatis

Most common neonatal conjunctivitis

Complications: URI, pneumonitis

Treatment:

Erythromycin 50 mg/kg/day po for 14 day

0.5 % erythromycin ophthalmic drops

Diagnosis: Clinical history

Culture of the discharge.

For suspected chlamydial conjunctivitis:

Giemsa stain shows intracytoplasmic basophilic inclusions, ELISA, PCR

Focal skin infections

Cellulitis,

pustulosis

omphalitis

caused by *S. aureus*.

pneumonia

The typical clinical presentation may be indistinguishable from sepsis, antibiotic treatment is similar. The usual patient is either a newborn in the first day of life with respiratory distress, or an

older infant who is ventilator-dependent due to bronchopulmonary dysplasia. Most neonatal pneumonias are diffuse

Urinary tract infection

may occur due to, or may cause, bacteremia. The incidence is higher in male infants, Gram negative organisms and enterococci are the most common causative organisms. Diagnosis is made with urinalysis and a urine culture obtained by suprapubic bladder aspiration or by by catheterization. In the absence of other systemic disease, UTI is treated with antibiotics for 7-14 days. a renal ultrasound should be performed to rule out an anatomic cause of the UTI. VCUG should be performed after the second UTI or if renal ultrasound shows structural abnormality.

Omphalitis

may remain localized or may spread to the abdominal wall, the peritoneum, the umbilical or portal vessels, or the liver. Infants with abdominal wall cellulitis or those with necrotizing fasciitis have a high incidence of associated bacteremia. Portal vein phlebitis may develop and result in the later onset of extrahepatic portal hypertension. The general manifestations may be minimal (periumbilical erythema), even when septicemia or hepatitis has resulted. Treatment includes prompt antibiotic therapy (with agents effective against *Staphylococcus aureus* and *Escherichia coli*) and, if abscess formation has occurred, surgical incision and drainage