SUMMARY AND CONCLUSION

Meconium is the distinctive intestinal contents of the fetus presented by the 16 th week of gestation. Full term infants passad meconiun for the first time after delivery earlier than preterm infants. And infant born vaginally passad meconium for the first time earlier than those born by cesarean section (as they were more acidotic).

* Starting of feeding early after labour leading to early appearance of jaundice and it earlier disappearance as compared with those preterm cases that depend on intraventous fluid on starting feeding.

* Delayed passage of meconium is associated with delayed enterohepatic circulation, delayed onset of jaundice and delayed its disappearance as regard to other cases that passed meconium early.

Meconium passage accurs in 10-15 % of all deliveries (12.5 % in one study). and meconium aspiration syndrome occurs in 5-30 % of meconiun stained neonates. (5.4 % in one study) and in 1-3% of all deliveries.

Meconium stained liquor is commonly observed in the following cases:

1-Perinatal asphyxia whether the hypoxic insult is acute e.g. prolonged cord occlusion or significant placental separation or chronic placental insufficiency. The hypoxic stress results. in exaggerated fetal respiratory effort and the amniotic fluid is aspirated to varying degrees, the same hypoxic stimuli may be also responsible for meconium passage.

2-Maternal drug addiction what ever the gestational age of the fetus. in this situation mecnium passage occurs as a consequence of intestinal hyperperistalsis as a manifestation of drug with drawal.

3-post mature and intra uterine growth retardation

4-Breech Presentation.

Clinically the infant with meconium aspiration syndrome frequently exhibits the classical signs of post maturity with nails, skin and umbilical cord heavily stained with a yellowish piqment. There is also respiratory distress at birth with tachypnea,cyanosis, grunting and retraction. The infant may be respiratory or neurologicaly depressed from hypoxic insult.

Meconium aspiration syndrome may be diagnosed ante natal by ultra sonography and simultaneaus determination of hemaglobin and copro-porphyrin by second derivative differential spectorophotometry. After birth the following criteria have been adapted for diagnosis of MAS.

1- The presence of meconium in the trachea at birth followed by tachypnea but without evidence of infection.

2- Chest radio graph showing the characteristic appearance of MAS.

MAS must be differentiated from other causes of respiratory distress at birth e.g. respiratory distress syndrome, transient tachypnea of the newborn, intra uterine pneumonia, congenital pulmonary lymphangiectasia and anomalous pulmonary venous return.

MAS. may be complicated by one of the following complications:

1-Pulmonary barotrauma (pneumothorax, pneumo mediastinum).

2-Long term pulmonary sequelae (MAS survivors were found to be more susceptible for asthmatic symptoms than normal.

3- Persistent pulmonary hypertensian.

4- Proximal tubular necrosis secondary to hypoxia.

5- Meconium contamination of the middle ear leads to otitis media from foreign body inflammatory reaction.

6-Bacterial sepsis by enhancing bacterial growth in amniotic fluid through altering zinc to phosphorous ratio.

For the prevention of MAS we must prevent first the meconium passage by careful observation and monitoring of the mothers who are susceptible for hypoxia buring pregnaney. These mothers should also have fetal heart rate monitoring and fetal scalp blood samples for pH during labour. But for the prevention of MAS the following fact must be noted:

1-MAS is not always preventable.
2-The most important preventable measure at the time of the delivery is careful thorough catheter suctioning of secretions from the oropharynx before the frist breath.
3-Laryngoscopy and tracheal intubation and suctioning can be generally reserved to depressed infants who require positive pressure ventilation.

As regards the treatment, infant with MAS must be monitored clinically, loboratory and radiologically and according to the severity of respiratory distress he is either admitted in the intermediate care unite if the infant is mildly depressed, this infant usually becomes stable within a few hours: or admitted in an intensive care unite he will receive the routine care as regarded thermal environment, nutrition, observation the sequelae of asphyxia and treatment of complications. mechanical ventilation and extra corporal membrane oxygenation may be used for treatment of acute respiratory failure due to MAS.

Broad spectrum antibiotics may be used in treatment of MAS to prevent secondary bacterial pneumonia but corticosteroids therapy is not of benefit in the treatment of MAS.

Meconium stained liquor may complicate small for date , full term and post date new born babies but rerely complicate preterm babies even under stressfull conditions such as acute asphyxia. there are some abnormal states may specifically induce peristalsis in the fetus and there by promote meconium passage regardless of gestation of age such as maternal drug addiction or the use of prostaglandins in

indution of abortion. In this situation meconium passage occurs as a consequence of intestinal hyperperislalsis as a manifestation of drug withdrawal. has been associated with meconium passage possibly due to the action of drugs on receptors presents in fetal intestines.

The effect of meconium stained liquor on different body systems depends on whether the body was exposed to thick or thin meconium. Cases exposed to thin meconium where found to have better prognosis than those exposed to thick meconium. Cases exposed to thin meconium were found to have no respiratory distress or have T T N and have high Apgar score, no chest x ray findings or fine patcly infiltrate with normal kidney and liver functions. These cases have good prognosis.

Cases exposed to thick maconium were severely distressed with low Apgar score, impaired liver and kidney functions, chest x ray findings include pneumonic patches pneumo thorax and atelectasis. These cases have poor prognosis.

Meconium peritonitis is a rare occurrence in neonates. It is usually the result of prenatal bowel obstruction with subsequent perforation. The most common bowel disorders which leads to meconium peritonitis in utero are small bowel atresia, volvulus and meconium ileus. Meconium ileus is associated with cystic fibrosis in most cases of meconium ileus.

Meconium peritonitis may complicate intra uterine cytomegalo virus infection detected by ultra sound finding of a focal hyper echoic abdominal masses. detected during the second trimester. Meconium peritonitis may occur in congenital rubella syndrome.

Meconium peritonitis may be complicated by congenitalrupture of scrotum, meconiumperiorchitis, hydro colpos in female neonate.

Management of meconium ileus depends on presence or uncomplicated cases of meconium ileus treated with non oporative gastrographin enema. Enterotomy and irrigation reserved for enema

failure. Complicated cases, with volvulus, atresia, perforation are usually amenable to bowel resectiorn and primary anastomosis.