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18/MHS05/010

Physiology

ANA 206

Question

Discuss the rotation of the intestine

Answer

Our intestines are formed while we are fetuses in the womb, during the tenth week of

gestation. As the intestine develop, they normally from the base of the umbilical cord back into

the abdomen cavity. As the intestine returns to the abdomen, it makes two rotations and

settles into its normal positions.

 Intestinal malrotation, also called twisted intestines, occurs when the intestine does not

twist correctly. Instead, the way in which it twists blocks the intestine. Malrotation is often not

evident until the baby experiences a twisting of the intestine known as a volvulus.

 A volvulus is a disorder that causes an obstruction in the intestine, preventing food from

being digested normally. The blood supply to the twisted part of the intestine can also be cut

off, leading to the death of that segment of the intestine. Malrotation occurs in one out of

every 500 births. Among those children who have malrotation and develop symptoms, most

symptoms will occur in the first year of life. Malrotation occurs equally in boys and girls.

However, more boys show symptoms within the first month of life than girls. There is no exact

cause of malrotation.

SYMPTOMS

• abdominal pain and cramping

• Frequent vomiting, often green or yellow-green in color

• A swollen, firm abdomen

• Pale color

• Poor appetite

• Little or no urine (due to fluid loss)

• Infrequent bowel movements

• Blood in the stools

• Fever

• Lethargy (showing little energy)

DIAGNOSIS OF INTESTINAL MALROTATION

1) Abdominal X-ray – Reveals any intestinal obstruction.

2) Barium swallow upper GI test – Examines the small intestine for abnormalities and to

check the position of the jejunum. A chalky fluid called barium is swallowed or placed

into the stomach through a small nasogastric tube. The barium coats the inside of the

stomach and intestine so that they will show up on X-rays.

3) Barium enema – Examines the large intestine. Barium is given into the rectum as an

enema. X-rays can show that the large intestine is not in normal position.

4) Abdominal ultrasound – Produces moving images of internal organs using invisible

electromagnetic energy.

TREATMENT

 Intestinal malrotation is diagnosed, children begin receiving fluids and antibiotics

intravenously. The fluids keep them from becoming dehydrated, and the antibiotics prevent

infections. A nasogastric tube is placed from the nose into the stomach to prevent gas buildup

in the stomach.

 As soon as possible, twisted bowel surgery is performed to untwist the intestine. If it is not

damaged too badly, the intestine’s circulation may be restored after it is untwisted. If the

intestine is healthy, an operation called the Ladd’s procedure is performed to repair the

malrotation.