Meckel diverticulum (MD) is the result of persistence of the omphalo-mesenteric or yolk duct, which normally occurs between the 6th and 8th weeks of gestation. It is the most common congenital anomaly of the gastrointestinal tract; it affects 2% of the general population [1]. Complicated forms represent 4 to 16% of MD; intestinal occlusion being one of the most frequent complications, with multiple mechanisms [2,3]. We report a MD observation complicated of acute intestinal occlusion with a histology showing gastric heterotopia lesions.

Patient and observation

It was a 15-year-old male patient without any specific pathological medical history admitted to the emergency for a 3-day evolving occlusive syndrome. Physical examination showed a fairly good general condition, a 38.5°C fever, a blood pressure of 110/80 mm Hg, a pulse of 85 beats / min. The abdomen was distended, sensitive as a whole with a generalized defense. The hernial orifices were free. The blood count and number showed a leucocytosis with 11000 elements / mm³ predominantly neutrophilic. A 127 Eqmol / l hyponatremia was noted. The abdomen Xray showed acute intestinal occlusion signs (Figure 1).

After resuscitation, surgical exploration by a median laparotomy had found incarceration of necrotic handles beneath a bridle connecting a MD to the sigmoid colon. Necrosis of the small intestine extended over a length of 80 cm from the ileocaecal junction (Figure 2).

The 5 cm long MD was located 60 cm from the ileocaecal junction on the anti-mesenteric border with a wide implantation base.
We performed a section of the flange and a resection of the necrotic small bowel followed by an ileo-colic anastomosis. There was no drainage of the abdomen. The post operative management was simple. The anatomopathological examination of the surgical specimen showed gastric heterotopia and inflammatory lesions within the mucosa of the MD. In addition, there were necrotic-hemorrhagic rearrangements of the intestinal wall which revealed no histological malignancy.

Discussion

Described for the first time, by Johann Friedrich Meckel in 1809, MD is the most common congenital abnormality of the digestive tract [4]. Physiologically, obstruction of the omphalomesenteric duct occurs between the 5th and 8th week of intra-uterine life. In case of non-obstruction, various anomalies can be observed. Thus, the permeability of the channel producing a Meckel's diverticulum can be observed. It is presented as an intestinal segment on the anti-mesenteric side of the ileum, localised at a variable distance from the ileocaecal angle (about 20 to 80 cm) at the termination of the superior mesenteric artery. About 4% of the diverticula are symptomatic, especially in children. Complications occur mostly in the first years of life, and are more frequent in men, with a sex ratio of 2 to 4 [5].

Intestinal occlusion remains the most frequent occurrence and represents 26.2 to 55% of complications according to Kim [3]. In our case, the flange is secondary to a inflammation of the MD. Accounts for 23 to 53% of all MD complications [3, 7]. In our case, the flange is secondary to an inflammation of the MD.

In the literature, gold standard is the segmental resection which takes out the diverticulum as it has been done for our patient [5,8]. This technique prevents the risk of omitting hetero-topic cells that may perpetuate the symptomatology; since the risk of carcinomatous degeneration of a hetero-topic mucosa is not nil [9]. A gastric heterotopia was found on the operating room of our patient. Gastric heterotopia is the most frequent in the literature [10]. The occurrence of complication is strongly related to the existence of heterotopia. Thus Park, finds a rate of 43.4% ectopiamucosa on complicated MDs against a rate of 14.2% uncomplicated DM [2]. Khemekhem found in his series of 58 patients found 50 to 80% of gastric heterotopia [10].

Conclusion

MD complications are rarely diagnosed pre-operatively due to their clinical latency. Current advances in medical imaging have made it possible in several studies to better approach the diagnosis. Presently, laparoscopy is one of the best techniques for the diagnostic and therapeutic management of MD.

References