Importance of Differentiating Mesenteric Lymphadenitis from Appendicitis

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Introduction
This article won’t be typical, but it will be very useful for everyone who will be in situation to solve one very frequent problem. What kind of problem? The symptoms of these two diseases are very similar, but not identical. The treatments are different! As we wanted to help patients in the first place, that’s why we made this protocol. And also to help our colleagues how to recognize the differences between mesenteric lymphadenitis and appendicitis.

Pain
Mesenteric lymphadenitis
There is a gradation in appearance of pain in this disease. At the beginning it has low intensity. From the moment when intensity of pain reaches its maximum, the patient complains on diffuse tenderness. On clinical examination we can find diffuse tenderness on palpation of the anterior abdominal wall. It is possible that tenderness is more conspicuous on the left side of abdomen. Also tenderness can be on the right side, but never just there.

Appendicitis
The pain occurs suddenly. In many cases it starts in the area of the navel. Then it migrates along an imaginary line on the right side to the right lower quadrant of abdomen, where it stays fixed. The pain is constant and persistent. On clinical examination we can find tenderness in the right lower quadrant of abdomen, never on the opposite side.

Vomiting
Mesenteric lymphadenitis
By analyzing all the cases of patients with mesenteric lymphadenitis in our clinical papers, it was found that this symptom occurs in 31% of cases. Almost 98% of our patients had vomited several times before coming to the hospital. Vomiting quickly stops within the first bottles of fluids and electrolytes.

Appendicitis
Vomiting represents the second most frequent symptom in appendicitis. In the analysis of our clinical papers, it was found that vomiting occurred in 96.5% of patients who had registered appendicitis. During the replacement of fluid and electrolyte, vomiting takes longer than in the case of mesenteric lymphadenitis.

Body temperature
Mesenteric lymphadenitis
Body temperature can be measured only axillary, with known conditions. Body temperature for a short time reaches its maximum, which is around 38.5°C. If there is respiratory or urinary infection present, temperature may be higher. With proper rehydration it is gradually lowered to the level of subfebrile or afebrile temperature.

Appendicitis
In the beginning, more frequent measurement of the temperature can clearly indicate the course of inflammatory process. If the temperature is increasing, the process progresses, otherwise it regresses. Appendicitis catarrhalis is characterized with the initial subfebrile temperature. If the temperature rises, the inflammation progresses. When the process takes the character of phlegmonous inflammation,
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it should be operated. Body temperature is in the range 37.5°C - 38.1°C. If temperature decreases to the physiological values, inflammatory process is regressing, surgical intervention is not needed. Rehydration does not effect on the height of body temperature.

Meteorism
Mesenteric lymphadenitis

Meteorism is always present in the case of this disease. In younger patients it is more pronounced. Besides meteorism we can always encounter diffuse tenderness on palpation. The above makes it quite clear what it is. Positive findings of ultrasound examination clearly confirms that it is mesenteric lymphadenitis.

Appendicitis
Meteorism does not occur in appendicitis.

Laboratory analysis - number of leukocytes
Mesenteric lymphadenitis

With careful analysis of patients where is undoubtedly established mesenteric lymphadenitis, laboratory findings are confusing in the beginning. Soon it can be realized that the laboratory findings are very uncharacteristic. They range from extreme leukopenia to leukocytosis. Therefore, we believe that this information should not be taken into consideration when diagnosing mesenteric lymphadenitis.

Appendicitis

In this disease laboratory findings are quite characteristic. Appendicitis is characterized by moderate leukocytosis. Values are ranging 11 - 16 x 10³ mm⁻³. Average number of leukocytes in patients with confirmed appendicitis are 13.7 x 10³ mm⁻³.

Laboratory analysis - urine
Mesenteric lymphadenitis

If preliminary findings indicate that patient have mesenteric lymphadenitis, findings of urine are negative. On the other hand, a positive finding may point to a possible association with urinary infections. Both diseases are treated medically.

Appendicitis

The finding that occurs as urinary infection, within the previous findings, is differentiating into two conditions: "clean" urinary infection or inflamed retrocoecal appendix.

Ultrasound examination
Mesenteric lymphadenitis

Ultrasound examination of these patients is routine. Although some ultrasound examination are made on the next day (on duty), the results within the previous findings are satisfying.

Appendicitis

Ultrasound examination of this patients is routine. Although some ultrasound examination are made on the next day (on duty), the results within the previous findings are not satisfying.

Discussion

Every abdominal pediatric surgeon was or will be in situation to decide is some case appendicitis or mesenteric lymphadenitis. For appendicitis further steps are known. There is only one correct treatment of this disease - appendectomy. Also it is important to do this procedure in right time. Not too late. Before perforation, before complication.

On the other hand, if there is a case of mesenteric lymphadenitis, appendectomy will be harmful. Appendix is totally normal. Unnecessary laparotomy can be dangerous for human life, especially in childhood. The right therapy for this situation is to give adequate volume of fluid and electrolytes. It is important to administrate antibiotics. In two or three days, young patients will be in good condition.

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