Clinical diagnosis

Case 351

2. Nuck canal, 3. Appendicitis

[Progress]

She underwent laparoscopy which revealed appendicitis and Nuck canal.

[Discussion]

The patient presented in our hospital with the reference comment from local clinic of suspicious incarcerated inguinal hernia with intestinal ileus. Abdomen CT depicted cystic lesion at left inguinal ligament but no evidence of intestinal ileus. Laparoscopic findings revealed appendicitis. Acute appendicitis was not made prospectively. Retrospectively, the swollen tubule like swollen appendix was identified.

There are several pitfalls on non-enhanced CT to be unable to make diagnosis of appendicitis. Swollen appendix comes to resemble to ileum end, inducing to be difficult to differentiate between them. Further, in case of cecum descent, overlapping with sigmoid colon makes confusing to identify swollen appendix. Furthermore, less fat tissues of mesentery induces difficulty to identify peritonitis. In this situation, contrast-enhanced CT is recommended because it makes easy to follow bowel continuation and interpret clearly iliac vessels and bowels.

Nuck canal of woman and hydrocele of testis have common origin backgrounds. Both exist as remnant cyst, although Nuck canal remains in inguinal band (1-3).

Testis originally present in retroperitoneum begins to descend at embryonal age pulled by connective bundle called leading belt (Gubemaculum) connected to external oblique muscle. Testis with leading belt descends to space created by folding inside of abdominal cavity, of external oblique muscle, internal oblique muscle and transverse abdominal muscle. It looks like opening a way for descending of testis. The way or space created by these muscles, are corresponded to inguinal canal. A part of abdominal cavity becomes like an envelope, called process vaginalis, connected to abdominal cavity. After completion of testis descend, descended abdominal envelope comes to create scrotum and closed. Inguinal canal becomes inguinal band or ligament. Leading belt becomes shortening and constriction. The remnant of inguinal canal is the cause of inguinal hernia, the remnant of process vaginalis is hydrocele of testis (1-6).

In woman, Muller tubules combine into one, creating uterus. Ovary connects leading belt (Gubemaculum) but does not descend because of no support of androgen. Leading belt connects to uterus, indicating ovary to be fixed to uterus. Distal end of leading belt is corresponded to major labia. Incompleteness of inguinal canal closure comes to inguinal hernia and incompleteness of process vaginalis comes to cystic remnant called Nuck canal (4-6).

Both hydrocele of testis and Nuck canal are the remnants of abdominal cavity envelope emerged in the mature process of ovary and testis. Both are cystic lesions and Nuck canal exists as abdominal cavity remnant at the inguinal ligament.

【Summary】

We presented a sixty-nine-year-old female for abdominal pain and left inguinal hernia suspicious inguinal incarceration. Laparoscopic findings revealed acute appendicitis and Nuck canal. It is borne in mind that appendicitis is sometimes difficult to make its diagnosis on non-enhanced CT in case of cecum descent and less fatty tissue. Nuck canal and hydrocele of testis have the common etiology of remnant of abdominal cavity envelope called process vaginalis. Neck canal remains as cystic lesion at inguinal band because of unclosed abdominal lumen envelope.

【References】

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