

Appendicitis after Appendectomy: A Rare Case

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ABSTRACT

Acute appendicitis is the most common surgical emergency encountered in daily practice setting and appendectomy is most familiar surgical intervention performed in surgical emergency department. The correct diagnose remain tricky even though there are many options available for diagnosis. It becomes very difficult for surgeons to reach on exact diagnose when the patient gave history of previous history of appendectomy. Stump appendicitis is a very rare complication after appendectomy and leading causes of morbidity among children. Stump appendicitis is defined as acute infection of residual appendix. Stump appendicitis is very difficult to diagnose and required a competent surgical tool to quickly evaluate after appendectomy. Instead of having advancement in the field of technology and imaging sciences still the condition is prone to threat and cases of stump appendicitis have been underreported and undiagnosed.

Keywords: Pandemic; COVID-19; Second wave; Delivery; Mortality rate

INTRODUCTION

Abdominal pain is most frequent problem in children and statistical data presents that about 5000 female and 10000 male approximately visits the indoor and outdoor department of emergency surgical department of children hospital for a complaint of acute appendicitis under 15 years of age in one month. Among 100 cases of surgical problem like intestinal obstruction, imperforate anus, inguinal hernia, paralytic ileus etc. the 2%-5% cases were diagnosed of appendicitis in daily routine in pediatric surgical settings. Appendicitis is comes in one of the most common surgical emergencies. It causes severe lifetime risk if its prompt intervention will not corrected through surgical procedure known as appendectomy. The complication of appendectomy are wound infection, vomiting, abdominal pain, fever and stump appendicitis [1-4] (Tables 1 and 2).

Blood test report	Increased leukocyte count (>4.5 to 11.0 × 10 ⁹ /L)
Urine test report	Pus cells+
CT scan	Inflammatory remnant appendicular area
Stump length	NA

Table 2: Observed incidence of abdominal pain.

Approximate No. of visits to surgical emergency	5000 female and 10000 male children per month
Average age	<15 years
Incidence of appendicitis	2%-5%/day
Stump appendicitis	1 in 50000 cases of appendicitis

Stump appendicitis has an estimated incidence of 1 in 50,000 and can occur after both open and laparoscopic surgeries, months to years after initial removal. Stump appendicitis is very rare complication after appendectomy which is caused by remnant appendix tissue due to incomplete removal of inflamed appendix. Stump appendicitis is considered as uncommon existence in post-operative case appendectomy so that's why many surgeon did not think about it when the patient complaints of severe abdominal pain, vomiting increase TLC and make other diagnosis despite of clinical presentation of appendicitis. There are very little guidelines available for the management of SA with operation while others physicians keep patients on conservative treatment (antibiotics). Stump Appendicitis is serious complication which is still unfamiliar for many medical health professionals due to very low index of underreporting, its unique existence and devious to rollout. No

Table 1: Pediatric patient profile.

Clinical case	Stump appendicitis
Admission	19-Oct-18
Sex	Female
Age	10 years
Symptoms	Abdominal pain
Pain	Right iliac fossa
History	Nausea, hyperthermia and vomiting for 2 days
Department	Emergency surgical
Initial discharge	23-Oct-18

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matter having facility of imaging technology favors us to early recognition and quick surgical intervention the actual diagnose always has been delayed and requires correction intervention of it because it causes many serious hazardous effects on children health [5,6].

CASE REPORT

This was a very rare case of stump appendicitis in surgical emergency department of Children Hospital Faisalabad on dated 19-10-2018. A 10 years old female was landed in emergency department with severe abdominal pain in right iliac fossa, history of nausea and vomiting from last two days. Her mother told that one year back she had following an open appendectomy. On physical examination there was marked tenderness at right iliac fossa along with rebound tenderness. There were few episodes of vomiting and hyperthermia. The blood tests showed increase number of leukocytes count and many pus cells in the urine test. The surgeon was suspecting intestinal obstruction but the abdominal ultrasound and abdominal x ray did not reveal any marked sign of abdominal abnormality. The patient was kept on conservative treatment for five days and discharged on dated 23-10-2018. But again patient presented with same complaints of abdominal pain and constipation with yelling condition with her mother. The physician sent all base line and recommended abdominal CT scan which showed a remnant appendicular area with inflammatory changes after that again appendectomy was performed (Tables 1 and 2).

RESULTS AND DISCUSSION

Stump appendicitis is very unique and rare in surgical unit and as result of its uncommon entity it is not entertained at once in patients who have gone previous open or laparoscopic appendectomy which consequently become awkward to diagnose it as again appendicitis. Due to delayed diagnose and incompetency of medical health professional to rollout; it leads towards further complication such as abdominal perforating, infection and intestinal obstruction and morbidity in children. Stump appendicitis is not well described in the emergency medicine literature. These patients had an evolving abdominal exam consistent with appendicitis despite their surgical history [7,8].

Due to high radiation from imaging machines the decision to carry out computed tomography can be difficult for physicians. While it is important to adequately rule out dangerous pathologies, it is also important to limit ionizing radiation doses in children. Ultrasound can be a screening tool to evaluate some etiologies of abdominal pain, but computed tomography with oral and intravenous contrast may be required for a definitive diagnosis in complicated and unusual cases such as this one [9].

Children are more vulnerable group and are at higher risk of getting more serious by a minor ailment. So greater attention should be given towards early identification and exact diagnose. Pediatric patients complaining of persistent abdominal pain often have an attributable, nonsurgical cause such as constipation or gastroenteritis and the children did not have capacity to spoken out what and where exactly they are feeling pain. The child was suffering from high grade fever and presents clinical picture of infection (leukocytosis). However, she developed a fever throughout her stay in hospital, and her abdominal exam became more concerning, illustrating the importance of observation and serial examination when the diagnosis is uncertain [10].

Instead of making provisional diagnose such as acute abdomen, post diarrheal distension, urinary tract infection, intestinal obstruction, keeping patient's on conservative treatment and planning of discharge; the surgeon should give priority to roll the basic pathology, interpret and consult with other team member is most important for improving and preventing further complication. Furthermore such rare cases should be report and standard operating procedures should be made for future guidelines to handle this type of unique case can be seen in Table 3.

Table 3: Stump appendicitis statistics in US.

Average age	37 years
Males	62%
Females	42%
Open appendectomy	68%
Laparoscopic appendectomy	32%
Average interval	8 years
Mean leukocytes	13,700 cell/mm ³
CT scan	52%
Ultrasound	10%
Average stump length	3.4 cm
Mean hospital stay	8 days

Note: n=40 [10].

CONCLUSION

Stump appendicitis is a serious complication of appendicitis. It is very unfamiliar entity in surgical units encountered by health professions. The matter of great concern should be put on reporting and giving awareness about such unique case. Special protocols and guidelines should be given to health professional for early recognition of this serious emergency.

A clinician should have a high index of suspicion if there is a history of previous appendectomy either open or laparoscopic while signs and symptoms favoring a diagnosis of acute appendicitis.

Documented patient informed consent and Institutional Review Board approval has been obtained and filed for publication of this case report.

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