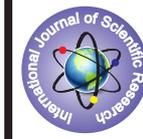


Frequency of appendectomy in a Pediatric Hospital



Medicine

KEYWORDS: appendicitis, infants, Mexico

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ABSTRACT

Introduction. Acute appendicitis is the most frequent abdominal surgical urgency in schoolchildren. It is estimated that 8% of the population undergoes an appendectomy procedure and about one third of patients are under 18 years. **Objective.** To determine the frequency of presentation in appendicitis in a Pediatric Hospital. **Methodology.** We performed an observational, analytical, cross-sectional, retrospective review of pediatric patients with appendectomy, using the Pearson chi-square test, accepting a $p < 0.05$. **Results.** 30 cases where male gender was more prevalent (70%), showing absceded and perforated appendicitis without relation to previous drug intake ($p > 0.05$). **Conclusion.** The male gender tends to be more present with appendicitis, the time of diagnosis and hospital stay are of vital importance in the complication of this.

Introduction

In 560 patients under the age of 30 who underwent appendectomy at the Provincial Teaching Hospital "Saturnino Lora", complications increased in relation to age and more frequently associated diseases (Rodríguez Fernández, 2010)

A triggering factor in appendectomy laparoscopy in some cases is the obstruction of the light of the appendix, which is related to hyperplasia of lymphoid follicles submucous 60%, fecalitis 35%, foreign bodies 4%, hemoperitoneum being the less frequent complication (Palacios, Galaicia, & Leon, 2010).

In a sample of 53 pediatric patients, the most commonly reported signs and symptoms were: McByrney (94.3%), right iliac fossa pain (81.1%), nausea (81.1%), vomiting (76.6%).

The characteristic data of the disease are fever > 37.5 , pain in the right lower quadrant leukocytosis $> 10.0 \times 10^9/L$, (Khanafar, y otros, 2016), (Xu, Liu, Adams, & Karpelowsky, 2016), C reactive protein, suggestive neutrophilia in gangrenous and perforated cases, finding microbiota as fusobacteria in the distal mucosa and bacteroides in the proximal one. (Salö, y otros, 2017), (Marcus, y otros, 2016), the most frequent postoperative complications are surgical incision infection 10.7% and intraabdominal abscess in 3.5%, where being invasive can create an abscess > 6 cm in diameter. (Gorter, Meiring, van der Lee, & Heij, 2016).

Márquez et al. (2010) it refers to postoperative advantages of laparoscopic appendectomy such as: minimal pain, reduction of surgical wound infection, disappearance of incisions and incisional hernias, disappearance of postoperative adhesions, brief hospital stay. (Márquez, Ayala, & Palacios, 2010), (Karam, Hiuser, Magnuson, & Seifarth, 2016)

Therefore, the objective of this study was to determine the frequency of presentation of appendicitis in a Pediatric Hospital in Tabasco, Mexico.

Methodology

Study design

An observational, cross-sectional, retrospective review of pediatric patient records with appendectomy was performed at the Regional

Hospital of High Specialty of the Child "Dr. Rodolfo Nieto Padrón", in May of 2016, in Tabasco, Mexico

Universe shows and sampling

A universe constituted by patients attended in the months of March to May. Selected by non-probabilistic sampling for convenience Selection criteria

Inclusion: pediatric patients with appendectomy surgery. **Exclusion:** patients in neonatal intensive care units, newborns, or with incongruent diagnosis. **Elimination:** Patients discharged from hospital or deceased.

Data collection plan

A data collection instrument (dump sheet) was implemented with seven items that included variables such as: presentations of appendicitis according to post-surgical diagnosis, days of hospital stay

Statistical analysis plan

Data were processed and analyzed using Microsoft Excel[®], SPSS[®] v22. The Pearson chi square test was used, accepting a $p < 0.05$.

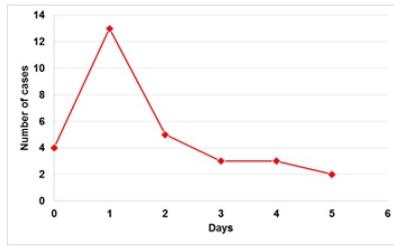
Ethical Considerations

The present study consisted in determining frequent presentations of appendicitis in infants governed by the General Health Law Title Fifth Article 99. (Secretariat, 2016), participants signed prior informed consent. The project was approved by the ethics and research committee of the University of Valley of México Campus Villahermosa.

Results

We reviewed 30 records of post-appendectomized infants being 21 males (70%), 9 females (30%), with age of 8.5 ± 1.4 years. As for the days of hospital stay, they had 2.5 ± 1.7 days. Figure 1.

Figure 1. Hospitalization days.



Six cases of infants with gangrenous and perforated appendicitis were found, with a history of prior drug ingestion (anti-inflammatories and antibiotics), with no significant association between consumption and complication (p=0.563). Table 1.

Table 1. Presentation of appendicitis

Appendicitis:	Intake of prior medication			p*
	n	Yes	No	
Edematous	3	1	2	0.563
Gangrenous	8	6	2	
Abcess	11	7	4	
Perforated	8	6	2	

* Pearson's chi square test

Source: Frequency of appendectomy in a Pediatric Hospital

Discussion

In a cohort of 438 infants with ages of 8.5±3.4 years, in whom abdominal ultrasound was used to diagnose appendicitis, 125 were positive of which 20 were gangrenous, 21 were perforated and 10 were abscessed; With a duration of symptoms of 44 ± 39 hours and elevated c-reactive protein. (Löfvenberg & Salö, 2016), in relation to our results we found that in the majority of complications were the abscess presentation, followed by gangrenous and perforated, with antecedent of previous drug ingestion for relief of symptoms, with no significant relation (p=0.563).

As for etiology, there have been less frequent cases with S. tiphy and paratiphy of the event (Stewart Parker, Atta, & Doddi, 2016); Model et al. (2016) makes reference to two cases of Sapovirus member of the family Calciviridae as cause of abdominal distention, finding positive in the c reactive protein in fecal sample. (Model & Burnweit, 2016).

Choi et al (2016) reported in 712 infants from South Korea the incidence rate of cases with the most prevalent late diagnosis in March to May (p=0.002), as well as emergency admission (p<0.001), with duration of Symptoms of one to three days (p<0.001) (Choi, Ryoo, Jo, Hann, & Kim, 2016), according to our results, 13 cases attended one day of hospital stay, and only two lasted up to five days.

Conclusion

In male gender, it was more frequent with cases of appendectomy, with 2.5±1.7 days of hospitalization, 20 cases of appendicitis presentations with previous medication intake were found, with no significant relation. It is of great interest for the physician to be able to discern between cases of acute abdomen, those of surgery, given that time is of vital importance.

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