

TIME OF DISEASE AND PREMEDICATION AS A RISK FOR PERFORATED APPENDICITIS IN THE VENTANILLA HOSPITAL 2017

TIEMPO DE ENFERMEDAD Y PREMEDICACIÓN COMO RIESGO PARA APENDICITIS PERFORADA EN EL HOSPITAL DE VENTANILLA 2017

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ABSTRACT

Objective: To determine the time of illness and pre-medication as risk factors for perforated appendicitis in the Hospital of Ventanilla during the period of January- September 2017. **Methods:** An analytical study of type and control was carried out. The population consisted of 234 patients with their clinical histories. The group cases constituted by 78 patients with postoperative diagnosis of perforated appendicitis, and the control group constituted by 156 patients with postoperative diagnosis with non-perforated appendicitis. **Results:** It was found that 61.5% of the patients with a disease time longer than 72 hours had perforated appendicitis (OR = 5.33, 95% CI (2.96, 9.61), $p < 0.001$). 69.2% of patients with an out-of-hospital disease time longer than 24 hours presented perforated appendicitis (OR = 5.72, 95% CI: (3.16 - 10.37), $p < 0.001$). 56.4% of patients with intrahospital disease time greater than 12 hours had perforated appendicitis (OR = 2.24 95% CI (1.29, 3.91) $p < 0.003$). In relation to pre-medication, 15.4% of patients who took previous medications had perforated appendicitis (OR = 2.97, 95% CI (1.19, 7.39) $p = 0.017$). **Conclusion:** It is concluded that the time of illness and the pre-medication that in the majority of the unprescribed are risk factors for the presence of perforated appendicitis.

Key words: Appendicitis; Treatment; Premedication. (source: MeSH NLM)

RESUMEN

Objetivo: Determinar el tiempo de enfermedad y premedicación como factores de riesgo para apendicitis perforada en el Hospital de Ventanilla durante el período de Enero - Septiembre 2017. **Métodos:** Se realizó un estudio analítico de tipo casos y controles. La población estuvo conformada por 234 pacientes con sus historias clínicas, el grupo casos constituido por 78 pacientes con diagnóstico postoperatorio de apendicitis perforada y el grupo control constituido por 156 pacientes con diagnóstico postoperatorio con apendicitis no perforada. **Resultados:** Se encontró que, del total de pacientes con tiempo de enfermedad mayor de 72 horas, 61.5%, presentaron apendicitis perforada (OR= 5.33, IC 95% (2.96; 9.61), $p < 0.001$). Asimismo, el 69,2% de pacientes con un tiempo de enfermedad extrahospitalaria mayor de 24 horas presentaron apendicitis perforada (OR=5,72, 95% IC (3,16 - 10,37), $p < 0.001$). Se encontró que el 56,4% de pacientes con un tiempo de enfermedad intrahospitalaria mayor de 12 horas presentaron apendicitis perforada, (OR= 2.24, IC 95% (1.29; 3.91), $p < 0.003$). En relación a la pre-medicación, el 15,4% de los pacientes que tomaron medicamentos previos, presentaron apendicitis perforada, (OR= 2.97, IC 95% (1.19; 7.39), $p = 0.017$). **Conclusión:** Se concluye que el tiempo de enfermedad y la pre-medicación que en su mayoría la no prescrita son factores de riesgo para la presencia de apendicitis perforada.

Palabras clave: Apendicitis; Tratamiento; Premedicación. (fuente: DeCS BIREME)

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INTRODUCTION

The most serious complication of acute appendicitis is perforation due to its high morbidity and mortality. It has been pointed out that the probability of perforation could be related to the time of illness and medications prior to medical care¹.

Acute appendicitis is one of the most common abdominal surgical emergencies, which affects around 10% of the world's population¹. It is necessary to know that 50 years ago, 15 out of every 100,000 people died of acute appendicitis; however, the probability of dying from non-gangrenous appendicitis is currently less than 0.1%².

In 2012, Ecuador showed 9.4% of acute appendicitis progressed to perforated acute appendicitis⁸. Likewise, in 2012 in Santiago de Cuba - Cuba 13%⁹ and in 2008 at the Vicente Corral Moscoso Hospital in Cuenca, Chile 36.17% 10 progressed to the aforementioned pathology.

In Peru, in 2011 appendicular disease ranked second among the forty leading causes of morbidity requiring hospitalization; Therefore, acute appendicitis is an important public health problem, reaching 30,000 cases per year³. Perforated appendicitis is the first complication of extreme high morbidity worldwide and nationally. It has a prevalence in the adult between 13% and 37%⁴.

Because the most serious complication of acute appendicitis is a perforation, the main objective of the present study was to determine the time of illness and pre-medication as risk factors for perforated appendicitis in the Hospital de Ventanilla during the period of January - September 2017.

METHODS

An analytical, quantitative, observational case study and control design. The variables were evaluated: time of illness and pre-medication as risk factors for the development of perforated appendicitis.

The selection of patients was carried out using the probabilistic design technique. The sample consisted of 234 patients: 78 cases were patients with a postoperative diagnosis of perforated appendicitis and 156 controls, who did not present a diagnosis of perforated appendicitis.

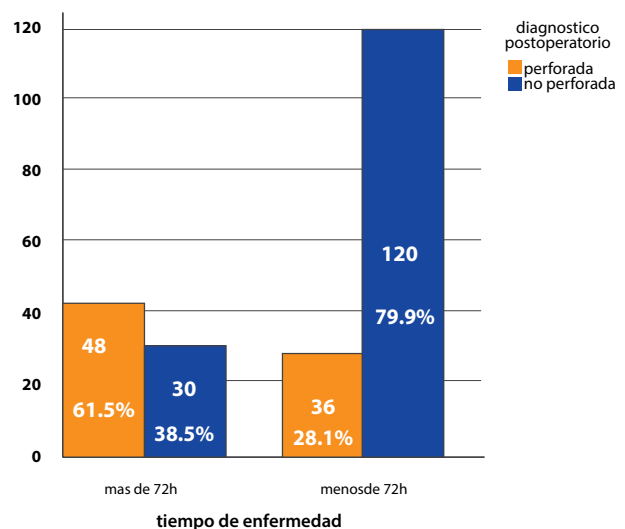
Data collection was performed using the database

of medical records of patients diagnosed with acute appendicitis after surgical treatment. The information obtained in the collection form was made from the software for data processing, the IBM -SPSS Statistics version 22.0 program.

For the statistical analysis of the data, its association was determined by means of Odd Ratio, with an IC 95% and a significance $p < 0.05$ by the Chi-square test.

RESULTS

It was found that, of the total patients with disease time greater than 72 hours, 48 (61.5%) presented perforated appendicitis, figure 1. Patients with disease time greater than 72 hours are 5.33 times more likely to present perforated appendicitis than patients with disease time less than 72 hours. This difference is statistically significant with a chi-square value of $OR = 5.33$, 95% CI (2.96, 9.61), $p < 0.001$.



Graph 1. Disease time.

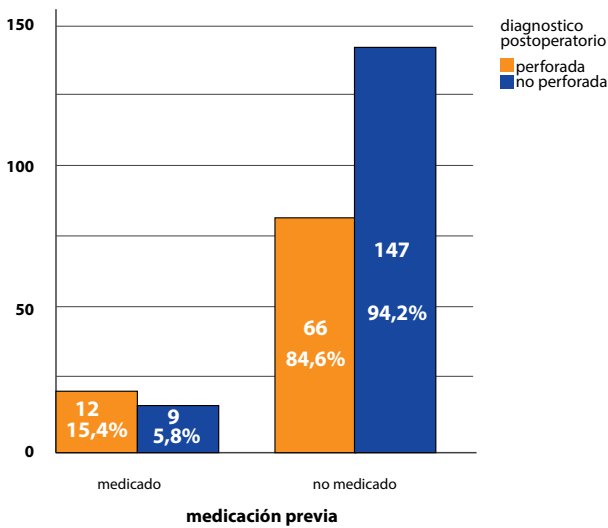
Patients with out-of-hospital disease time greater than 24 hours, 54 (69.2%) had perforated appendicitis and were 5.72 times more likely to have perforated appendicitis than patients with out-of-hospital disease time less than 24 hours. This difference is statistically significant with a chi-square value of ($OR = 5.72$ (CI: 3.16 - 10.37)), $p < 0.001$.

In addition, patients with intrahospital disease time greater than 12 hours, 44 (56.4%) had perforated appendicitis being 2.24 times more likely to present with perforated appendicitis patients with intrahospital disease time less than 12 hours. This difference is

statistically significant with a chi-square with a value of $OR = 2.24$ IC 95% (1.29, 3.91) $p < 0.003$.

In graph 2, it was found that, of the total of patients with previous medication, 12 (15.4%) presented perforated appendicitis. Of the total of patients who did not have previous medication, 66 (84.6%) presented perforated appendicitis. Therefore, patients with previous medication are 2.97 times more likely to have perforated appendicitis than patients without pre-medication. This difference being statistically significant with a chi-square with a value of $OR = 2.97$ IC 95% (1.19; 7.39) $p = 0.017$.

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Graph 2. Prior medication.

Table 1 shows the variables time of illness > 24 hours, intrahospital disease time > 12 hours, total disease time and previous medication as risk factors for developing perforated appendicitis and being statistically significant ($p < 0.05$).

DISCUSSION

A study in Colombia, mentions that of 206 patients who were included in the study, the time of evolution of the non-perforated appendicitis group was 22.5 ± 17.5 versus 33.4 ± 24.8 hours in the perforated group. ($p < 0.001$). There was no linear relationship between the time of symptoms and perforation⁸.

In a review article conducted at the National Hospital Sergio E. Bernales, we show that of 104 patients diagnosed with complicated acute appendicitis, 27.1% were found to have extra-hospital disease time greater

than 24 hours. Also Dr. Espinoza Mongue observed that having an extra-hospital disease time greater than 24 hours is 3 times more likely to present perforated appendicitis than of the total number of patients with out-of-hospital disease time greater than 24 hours 54 (69,2%) presented perforated appendicitis and it was concluded that they are 5.72 times more likely to present perforated appendicitis than patients with out-of-hospital disease time less than 24 hours. These data are similar to those found in our study.

According to our background, a large percentage of patients came to the hospital late from the onset of symptoms, this became a risk for a possible complication. The reason why people decide to go late to the hospital is related to self-medication and above all: waiting for the symptoms to go away and hoping a quick improvement.

In the National Hospital Sergio E. Bernales, a study was carried out with 104 patients diagnosed with complicated acute appendicitis. 16.3% of patients had an intrahospital disease time greater than 9 hours. In their study, it was established that these patients were 2 times more likely to present perforated appendicitis. In our study, we obtained that of the total of patients with intrahospital disease time greater than 12 hours, 44 (56.4%) had perforated appendicitis, and it was concluded that they are 2 times more likely to present complicated appendicitis than patients with intrahospital disease time less than 12 hours.

Our study is reinforced by the previous study to conclude the same probability of perforated appendicitis in their respective patients. This concept is based on the care provided by the health facility according to the level it belongs, in case of health centers Level I and II evidence a greater time of in-hospital illness, due to the shortcomings that it has, generating some resolute disability.

The study carried out in the hospital Cayetano Heredia, found that 43.3%, whose diagnosis was perforated appendicitis, had more than 72 hours of illness and that only 7.9% of non-perforated appendicitis had the same number of hours. Also Cabrejos J. in a study on the delay in surgical treatment at the Hospital de Apoyo de Chachapoyas, they mention that patients with a delay greater than 72 hours had a complication probability of 2 times greater than patients who did not have a greater delay before their surgical treatment.

In our study, it was found that 61.5% of patients with disease time greater than 72 hours had perforated appendicitis who were 5 times more likely to have

Table 1. Analysis bivariate of factors of risk for appendicitis perforated in the Hospital of Window January - September 2017.

VARIABLE	POSTOPERATIVE DIAGNOSIS		ODD RATIO (OR)	95% CONFIDENCE INTERVAL	P VALUE
	PERFORATED	NOT PERFORATED			
Out-of-hospital disease time	>24 hrs	54 (69.2%)	5,727	IC 95% (3.16; 10.37)	P<0.001
	<24 hrs	24 (30.8%)			
In-hospital illness time	>12 hrs	44 (56.4%)	2,248	IC 95% (1.29; 3.91)	P=0.003
	<12 hrs	34 (43.5%)			
Disease time	>72 hrs	48 (61.5%)	5.33	IC 95% (2.96; 9.61)	P<0.001
	<72 hrs	30 (38.5%)			
Previous medication	Si	12 (15.4%)	2,97	IC 95% (1.19; 7.39)	P=0.017
	No	66 (84.6%)			

ORIGINAL ARTICLE

perforated appendicitis than patients with a disease time less than 72 hours making it a risk factor to develop perforated appendicitis. Possibly due to factors such as delay time for surgical treatment due to lack of shifts of service personnel, lack of surgeons and also due to the use of pre-medication with analgesics.

In the study conducted in the regional hospital PEMEX Salamanca, Mexico, it was found that 58.9% of patients were premeditated and developed perforated appendicitis. It was also found that the average of the hours elapsed between the beginning of the clinical check and the surgical decision in the group of non-medicated patients was significantly lower than that of the group of medicated patients. Reaching the conclusion that the previous medication in patients with acute appendicitis is associated with the delay in making the surgical decision, with the respective increase in complications, such as appendiceal perforation. The study that is most striking in this case is the study carried out in the general surgery service of the new Durando sanatorium in Mexico, where it establishes that the previous medication increases the risk of appendiceal perforation 23 times.

Regarding premedication, in our results we found that of the total of patients, 15.4% had perforated appendicitis and it could be determined that patients that were premedicated are 2 times more likely to present perforated appendicitis than patients without pre-medication. It may be due to the fact that the use of the medication alters in a certain way the health of the patient, also the fact of taking a previous medication contributes to the delay of the patient when going to the health center, since it is waiting for a possible improvement due to the use of the medication.

In the same study already mentioned in the general surgery service of the new sanatorium hospital in Durando in Mexico, we wanted to specify that they only mention self-medication as a risk factor without taking into account the medications prescribed by a doctor, that is, unlike our research where we can see that 83.3% of patients with a previous medication were self-medicated and only 2 patients, that is, 16.7% were prescribed. The very important fact as it shows that there are still errors when it comes to a diagnosis in relation to abdominal pain, although the percentage is minimal and only 2 cases were found like these in the Hospital de Ventanilla Service.

CONCLUSION

It is concluded that the time that elapses before the surgical intervention and the premedication either self-medication or prescribed by the doctor are factors to progress to acute appendicitis complicated in patients with the diagnosis of acute appendicitis.

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