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CHARACTERISTICS OF PATIENTS WITH ACUTE APPENDICITIS AT RSUP DR. M. DJAMIL PADANG YEAR 2017-2019

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ABSTRACT

Acute appendicitis is an abdominal emergency requiring immediate surgical intervention. Acute appendicitis is defined as acute inflammation of the appendix wall which is usually caused by obstruction of the appendix lumen. The development of an inflammatory process in acute appendicitis can result in perforation, abscess, illegality, peritonitis, or death if not managed properly. Objective: To determine the characteristics of acute appendicitis patients at DR. M. Djamil Padang in 2017 – 2019. Methods: The research design used was a categorical descriptive study with retrospective data collection methods. The population in this study were patients diagnosed with acute appendicitis at DR. M. Djamil Padang in 2017 – 2019 with 112 samples using total sampling technique. The research data were analyzed using the univariate test and presented in the form of frequency and percentage distribution tables. Results: Characteristics of acute appendicitis patients at RSUP DR. M. Djamil Padang, based on age, acute appendicitis mostly occurred in the late adolescent age group (17 – 25 years). Characteristics based on sex, acute appendicitis mostly occured in males – 64 people (57.1%). Characteristics based on modified Alvarado score at most with a score of 9 (Definite acute appendicitis) – 62 people (55.4%). The most characteristics based on the management of acute appendicitis was open appendectomy – 97 people (86.6%). Conclusion: The result of this study show that acute appendicitis in late adolescents with an age range of 17 – 25 years. Acute appendicitis mostly in males with the most modified Alvarado score with 9 scores and open appendectomy was the main choice.

1. INTRODUCTION

Acute appendicitis is the most common abdominal emergency in digestive surgery. Acute appendicitis is defined as acute inflammation of the vermiform appendix wall that spreads to other parts. Usually this situation is caused by obstruction of the lumen of the appendix from various causes such as appendicitis, hyperplasia of the lymphoid tissue of the appendix wall, parasites, foreign bodies, neoplasms and metastases. The diagnosis of acute appendicitis is based on clinical, laboratory and imaging findings. Appendicitis is an acute abdominal condition that requires urgent surgical intervention.1,2

Based on research conducted by Papandria (2013), there were 683,590 patients with appendicitis, that is, 30.3% experienced perforation. Acute appendicitis occurs in the range of about 90-100 cases per 100,000 population per year in developed countries. The peak of the incidence of acute appendicitis usually occurs in the age range of 20 to 30 years. Most studies show that males are slightly more dominant than females. The results of the study reported by Bhangu, Aneel et al (2015) that geographical differences also

support the occurrence of appendicitis in developed countries with a lifetime risk for the incidence of acute appendicitis, such as in South Korea 16%, in the USA 9%, and in Africa around 1.8%.3.4

The prevalence of acute appendicitis in Indonesia in Kong (2012) reached 0.05% which made Indonesia the country with the highest incidence of acute appendicitis in Southeast Asia, followed by the Philippines with a prevalence of 0.022% and Vietnam with a prevalence of 0.02%.5 According to Thomas, et al. (2016) research was conducted at Prof. RSUP. Dr. R. D. Kandou Manado recorded 650 patients with a diagnosis of appendicitis for the period October 2012 - September 2015 with the most cases being acute appendicitis with 412 cases or 63% of the total appendicitis patients.6 Cases of appendicitis in the province of West Sumatra are quite high, especially in the city of Padang. According to Annisa Amalina (2018) at RSUP DR. M. Djamil Padang that the incidence of appendicitis within 2 years (1 January 2015-31 December 2016) was recorded as 199 cases of appendicitis.7

The scoring system used for the diagnosis of acute appendicitis is the modified Alvarado score. This scoring system was developed in an effort to improve the accuracy of the diagnosis of acute appendicitis. According to Ohle R, et al (2011) This scoring system is a clinical scoring system used to stratify the risk of appendicitis in patients with abdominal pain.8,9 Modification of the Alvarado score is based on clinical findings observed in acute appendicitis by looking at three symptoms, three marks, and one laboratory. The assessment of this score will greatly aid the diagnosis if it is suspected as the main cause of acute abdomen especially in low-resource areas where imaging is not the mainstay. Modified Alvarado score is widely used in the diagnosis of acute appendicitis because of its accessibility and low cost. This method also prevents the patient from being exposed to radiation.10,11,12

Acute appendicitis if not treated properly with immediate action will result in death. Speed and accuracy in diagnosing can reduce the morbidity and mortality of the incidence of appendicitis.4,13 Acute appendicitis can be given drug therapy, especially antibiotics. Prophylactic antibiotics need to be given before appendectomy to prevent infection due to surgical wounds.14 The results of the study conducted by Imelda (2007) found that 98.02% of patients underwent open appendectomy and 1.98% underwent laparoscopic appendectomy.15 Research conducted by Yang (2019) of 2,751 patients (conservative 1,463 patients and appendectomy 1,288 patients) were analyzed. Where patients who received conservative treatment had a lower overall effectiveness rate (0.11-0.17%) and complication rate (0.21-0.51%). Conservative treatment has a higher reoperation rate than appendectomy.16

Based on the above background, acute appendicitis is a surgical emergency that is very common in the wider community, if surgery is not performed and managed properly it will cause very dangerous complications. Therefore, researchers are interested in conducting research and studying the characteristics of acute appendicitis patients at RSUP DR. M. Djamil Padang in 2017-2019.

2. METHOD

The scope of this research is the scope of the digestive surgery discipline. This research was conducted in the medical records section of RSUP DR. M. Djamil Padang. The time of the study was carried out in April-December 2020. The type of research used in this study was a categorial descriptive study with a retrospective data collection method to determine the characteristics of acute appendicitis patients at RSUP DR. M. Djamil Padang in 2017-2019. The target population of this study were patients with acute appendicitis.

Procedure

Researchers take care of a research permit from the Faculty of Medicine, Baiturrahmah University to the Director of RSUP DR. M. Djamil Padang to conduct research. The data used as a sample is the period 2017-2019. research subjects obtained by probability sampling method with total sampling technique where the number of samples is the same as the population. Researchers

took secondary data by recording the medical record number of acute appendicitis patients. Secondary data that has been obtained and processed using univariate analysis and conclude the results.

Data analysis

Data analysis used by researchers in this study is univariate analysis. Univariate analysis is to describe the characteristics of each research variable in producing the level of frequency and percentage of each variable. The data obtained will be processed and analyzed using the SPSS Statistics 16.0 for Windows program with several statistical approaches as follows:

a. Editing
   Activities that aim to check the completeness of the data in order to provide clarity, consistency, readability and completeness.
b. coding
   The activity of converting data in the form of letters into numbers or numbers. The data is coded using numbers for all the data that has been obtained so that data processing and analysis do not occur errors.
c. Processing
   The activity after coding is processing the data for further analysis. Data processing can be done by entering the data that has been completely filled into the SPSS program and then processed.
d. d. Cleaning
   The activity of checking or re-checking the data that has been entered there are still errors or not. If there is an error in entering data, then correct it immediately with the actual data.

3. RESULT AND CONCLUSION

This study describes the characteristics of patients with acute appendicitis at RSUP DR. M. Djamil Padang Year 2017-2019. The data obtained in this study were in the form of medical records of acute appendicitis patients in terms of indicators of age, gender, diagnosis based on modified Alvarado score, and management of acute appendicitis patients.

Age

Based on the research conducted, the description of the frequency distribution and the percentage of age of acute appendicitis patients in RSUP Dr. M. Djamil Padang in 2017 – 2019 as shown in the table:

Table 1. Age Frequency Distribution of Acute Appendicitis Patients at Dr. RSUP. M. Djamil Padang Year 2017-2019

Patient Age (year)	***Frekuens***	***Persentas***
	i	e (%)
toddler: 0 - 5 year	8	7.1
Children: 6 – 11 year	25	22.3
Early teens : 12 – 16 year	19	17.0
Late teens : 17 – 25 year	28	25.0
Early adulthood : 26 – 35 year	17	15.2
Late adult : 36 – 45 year	9	8.0
Early seniors: 46 – 55 year	2	1.8
Late seniors : 56 – 65 year	3	2.7

Seniors : > 65 tahun	1	9
Amount	112	100

Based on table 1, the results obtained from 112 acute appendicitis patients, the most age group is the late adolescent age group (17-25 years) which is 28 people (25.0%), while the least age is the elderly group (> 65 years) which is 1 person (9.0 %) at RSUP DR. M. Djamil Padang in 2017 – 2019

Gender

Based on the research conducted, the description of the frequency distribution and gender percentage of acute appendicitis patients in RSUP Dr. M. Djamil Padang in 2017 – 2019 as shown in the following table:

Table 2. Gender Frequency Distribution of Acute Appendicitis Patients at Dr. RSUP. M. Djamil Padang Year 2017 - 2019

Gender	***Frequency***	***Percentage (%)***
Male	64	57.1
Female	48	42.9
Amount	112	100

Based on table 2, the results obtained from 112 acute appendicitis patients, the most gender was male, namely 64 people (57.1%) and the most gender was female, namely 48 people (42.9%) in RSUP DR. M. Djamil Padang in 2017 - 2019.

Diagnosis Based on Modified Alvarado Skor Score

Based on the research conducted, it is obtained an overview of the frequency distribution and the percentage of modified Alvarado scores of patients with acute appendicitis at RSUP DR. M.

Table 3. Distribution of Enforcement Frequency Daignosus Based Score Modification Alvarado Acute Apendisitis Patient In RSUP DR.M.Djamil Padang in 2017-2019

Score result Alvarado Modification	***Frequency***	***Percentage (%)***
Score 5 – 6	15	13.4
Score 7 – 8	35	31.2
Score 9	62	55.4
Amount	112	100

Based on table 3, the results obtained from 112 acute appendicitis patients, the highest score was a score of 9 (Definite acute appendicities) which was 62 people (55.4%), while the lowest score was a score of 5-6 (Possible acute appendicities) which was 15 people (13.4%) at RSUP DR. M. Djamil Padang in 2017 – 2019.

Table 4. Alvarado skor score modified results

Alvarado Score Modification	**Amount**
1.| Pain shifts to right iliac fossa	

a. Yes	112
b. no	0
2. Nausea or vomiting	
a. Yes	103
b. No	9
3. Anoreksia	
a. Yes	93
b. No	19
1. Pain Relief	
a. Yes	112
b. No	0
2. Right iliac fossa tenderness	
a. Yes	112
b. No	0
3. Body temperature (fever)	
a. <37,2 C	72
b. >37,2 C	40
4. Leukosit	
a. <10.000	96
b. >10.000	16

Management

Based on the research conducted, the description of the frequency distribution and the percentage of patients with acute appendicitis in RSUP DR. M. Djamil Padang in 2017-2019 as shown in the following table:

Table 5. Distribution of Frequency of Management of Acute Appendicitis Patients at RSUP DR. M. Djamil Padang Year 2017 – 2019

Mangement	Frequency	Persentase
Apendektomi Terbuka	97	86.6%
Apendektomi dengan laparoskopi	15	13.4 %
Amount	112	100

Based on table 5, it was obtained from 112 acute appendicitis patients, the most management performed was open appendectomy, namely 97 people (86.6%), while the least management was laparoscopic appendectomy, namely 15 people (13.4%) at RSUP DR. M. Djamil Padang in 2017 – 2019.

Discussion

Age

Based on the results of the study obtained from 112 acute appendicitis patients, the age of most patients was the late adolescent age group (17-25 years) namely 28 people (25.0%) in RSUP DR. M**.** Djamil Padang. This research is in line with Fransiska (2019) at Sanglah Hospital Denpasar in 2015 – 2017, the age of the most acute appendicitis patients was the late adolescent age group (17-25 years) (29.3%).17 Research conducted by Farahbakhsh (2020) at the Emergency

Department , Kerman Iran found similar results, the most common age in acute appendicitis patients was the age range of 10-25 years. it was found that the age of acute appendicitis patients was in the age group of 13-18 years (78.7%).19 This study is in line with research conducted by Ramadhanti (2018) at Tangerang Hospital. South in 2015 – 2016 that the most most patients with acute appendicitis are in the age group 15 – 24 years, namely 48 people (42%).20 A similar study was also reported by Choi (2016) at Gachon University Gil Medical Period September 2008 – November 2013 with a total of 712 patients, the age of the most appendicitis patients acute is the age of 13-18 years, namely 346 people (48.6%).21

Acute appendicitis can occur in any age group, but the peak of incidence of acute appendicitis can be found 13.4 between the ages of 10 – 20 years.17 Lifetime risk whole life in the United States for acute appendicitis reaches about 7-8%.22. The incidence of acute appendicitis increases with increase in age caused by increase in lymphoid tissue in the range that age. It is this condition that causes an increase in mucus production bacterial overgrowth, infection virus, and stasis that increases appendix wall tension. The result is blood and reduced lymph flow and lead to necrosis appendix perforation.23 The incidence of acute appendicitis can occur in adolescence (puberty) due to aggregate lymphoid plays an exaggerated role in the occurrence of appendicitis.24 Histologically, all organs lymphoid has matured and developed in one year old. Development and Peripheral lymphoid tissue maturation will develop rapidly during puberty, causes lymphoid tissue hyperplasia the appendix is obstructed as a acute appendicitis reaches about 7-8%.22 The incidence of acute appendicitis increases with increase in age caused by increase in lymphoid tissue in the range that age. It is this condition that causes an increase in mucus production bacterial overgrowth, infection virus, and stasis that increases appendix wall tension. The result is bloodand reduced lymph flow and lead to necrosis appendix perforation

Gender

Based on the research, the results were obtained from 112 acute appendicitis patients, the most gender was male, namely 64 people (57.1%) and the least gender was female, namely 48 people (42.9%) in RSUP DR. M. Djamil Padang in 2017 – 2019.

The results of this study are in line with Aliginko Jhosua (2017) at Queen's Hospital England - United Kingdom, the gender of acute appendicitis patients is mostly male (72%).28 In addition, there are similarities in the results of research by Chisthi Meer (2020) in Department Surgery, Government Medical College, India for the period 1 January 2018 – 1 January 2019 obtained the most gender was male (56%).29 The same research results were also shown by Nanjundaiah at Kasturba Medical College and Hospital India for the period December 2011 – December In 2012, the sexes that suffered the most acute appendicitis were male (61.6%) and female (38.4%).30 Different results were shown by Kamel (2018) Department of Surgery Imam Hussein Medical City Hospital, Iraq, it was found that patients most appendicitis are female (53%) and male (47%).31

The results of this study are in accordance with the literature, that acute appendicitis in men is 1.4 times more than women. Anatomical change factors affect the incidence of inflammation in the appendix organ which is generally found in men.32 This anatomical change of the appendix can increase intracecal pressure so that there is a functional obstruction of the lymphatic flow of the appendix lumen and the growth of bacterial flora that encourages appendicitis in men. boy.13

Acute appendicitis in men is also caused by predisposing factors that are considered multifactorial, starting from genetic predisposition, bacterial infection, viral infection, stress and

smoking, thereby increasing the incidence of appendicitis.33 In addition, appendicitis in men is also influenced by the number and proportion of tissues. lymphoid more than women.34

However, there are several studies which state that the incidence of appendicitis is mostly found in women. The difference in sex distribution is attributed to the fact that women presenting with appendicitis with right iliac fossa pain have a broad differential diagnosis as a result of acute appendicitis.35 Differential diagnoses include ectopic pregnancy, twisted ovarian cyst, salpingitis and pelvic inflammatory disease. Diagnosis during pregnancy is more difficult because of changes in the position of the appendix, nausea, vomiting, and increased leukocyte count during pregnancy. Therefore, additional investigations such as ultrasound and other modalities are needed to reduce negative appendicectomy in the female gender.36,37.

Modification of Alvarado's Score

Based on the research, the results obtained of 112 acute appendicitis patients, the most patients diagnosed using modified Alvarado score were 9 scores (definite acute appendicities), namely 62 people (55.4%) at RSUP DR. M. Djamil Padang in 2017 – 2019.

Research conducted by Zuriati (2014) at the Palembang Bari Hospital for the period of January 1, 2011 – December 31, 2014, the highest Alvarado score was the result of a score of 7-10 (acute appendicitis), namely 41 people (85.4%), and the result of a score of 5-6 (suspected acute appendicitis) were 7 people (14.6%) and the result score was < 5 (not acute appendicitis) (0%). the results of a score of 7 – 10 (acute appendicitis) were 91 people (57.6%).39 The study conducted by Kong (2012) at Edendale Hospital South Africa for the period January 2008 – December 2012, of 1,000 patients with acute appendicitis, the highest score was the score 7 – 10 (High) which is 434 people (43.4%) with the highest score of 9 as many as 124 people (24.3%), the result of a score of 5 – 6 (Intermediate) is 357 people (35.7%), and the result of a score of 1 – 4 (Low) that is 209 people (20.3%)40

The use of modified Alvarado score in the diagnosis of acute appendicitis can improve diagnostic accuracy and reduce negative appendicectomy and complication rates.24 The modified Alvarado score system is a simple scoring system that can be easily applied to outpatients.9 The Alvarado score helps stratify patients who must undergo further examinations. follow-up, follow-up, or surgery. This scoring system shows that patients with a score of 4 can be discharged without hospitalization but further observation or investigation needs to be carried out, then if the score is obtained a score of 5-7 should be further examined using imaging modalities such as radiological examination, especially in pregnant women and women of late adulthood, if a score >7 is obtained, appendectomy should be performed.41,36 The diagnosis of acute appendicitis can be specific or atypical, especially clinically. The specific presentation begins with vague periumbilical pain for several hours, which then moves to the right iliac fossa, decreased appetite, and nausea and vomiting. The atypical presentation does not have a characteristic progression, but right lower quadrant pain may be found as an early symptom.42

Based on the results of the modified Alvarado score study according to clinical symptoms in the form of pain moving to the right lower quadrant, 112 people experienced pain moving the right lower quadrant and there were no patients who did not experience pain moving the right lower quadrant. The results of the study are in accordance with Wei Ting (2010) at Taipei Hospital Taiwan, as many as 420 acute appendicitis patients experienced pain moving to the right lower quadrant (100%). experienced pain moving to the right lower quadrant, namely 216 people (93.1%).9

According to the literature on physical examination, more than 95% of patients with acute appendicitis have abdominal pain.25 Acute appendicitis usually describes a periumbilical colic

pain that increases during the first 24 hours, then the pain becomes constant and sharp followed by pain moving to the right lower quadrant iliac fossa. Initial pain is a symptom due to midgut visceral innervation and local pain is caused by the parietal peritoneum after the inflammatory process.25 This is different in children.– children where the pain moves to the right iliac fossa in children who have acute appendicitis, the clinical course is faster and if there is a delay in the examination of more than 12 hours since the onset of abdominal pain it can result in perforation. In 60% of cases pain usually starts in the area Periumbilical then localized in the right lower quadrant.

Modification of the Alvarado score based on symptoms of nausea and vomiting from 112 acute appendicitis patients, the most experienced nausea and vomiting was 103 people (92.0%). The results of the study according to Merhi (2014) at Makassed General Hospital Lebanon, the most acute appendicitis patients experienced nausea and vomiting, namely 188 people (81.0%).9 A similar study was shown by Aliginko (2017) at Queen's Hospital UK out of a total of 118 acute appendicitis patients, the most Many experienced nausea and vomiting, namely 91 people (77.1%).28 Research conducted by Memon (2013) at the Civil Hospital Pakistan of a total of 110 patients with acute appendicitis, the most patients experienced nausea and vomiting, namely 83 people (75.5%).45 Symptoms of nausea or vomiting in acute appendicitis caused by distension of the appendix which causes increased intraluminal pressure so that mucosal secretions increase and suppress vagus nerve with symptoms of nausea and vomiting.46,20

Modification of the Alvarado score based on symptoms of anorexia or decreased appetite from 112 acute appendicitis patients, the most experiencing anorexia, namely 93 people (83.0%). Research conducted by Merhi (2014) at Makassed General Hospital showed that 184 people (79.3%) experienced anorexia the most. 9 Anorexia in acute appendicitis occurs due to increased intracecal pressure which stimulates the efferent nerves, resulting in pain in the epigastric area followed by a decrease in appetite. (anorexia).38

Modification of the Alvarado score based on tenderness and relief of pain obtained 112 people. Abdominal examination revealed tenderness and muscle rigidity in the right iliac fossa. The pain may be more severe with coughing, walking, movement and straining. Tenderness is a clinical finding that can be relied upon for the diagnosis of acute appendicitis.25 The results according to Zuriati (2016) found that all acute appendicitis patients experienced tenderness and pain relief.38 Research conducted by Ceren (2016) at the Department of Emergency Medicine, Gazi University Turkey tenderness detachment is the most common symptom and detected in patients with acute appendicitis Tenderness and pain relief in appendicitis acute indicates an inflammatory process that continues in the serous layer of the appendix and parietal peritoneal stimulation, so that when the emphasis is on Mc. Burney points are slowly and suddenly released will cause tenderness.38,48 Modified Alvarado score based on symptoms of fever obtained 72 people (64.3%) and is not accompanied by symptoms of fever 40 people (35.7%). Fever in appendicitis acute is a form of response systemic inflammation. Fever is caused due to luminal obstruction and stasis intraluminal and overgrowth co-occurring enteric bacteria leads to the initiation of an inflammatory response acute systemic, with release of cytokines and leukocyte activity that causes inflammation characterized by symptoms of fever in the patient. RIPASA. RIPASA scores in Indonesia itself very rarely used, and the RIPASA score this needs a lot of checking such as negative urinalysis with obstacles that are usually the result of inspection this is very rarely included in the record medical.50,51 RIPASA scoring system is very rare used in the diagnosis acute appendicitis compared with systemic Alvarado score modified scoring. This matter shows that the scoring system Alvarado score modification is perfect for make a diagnosis if suspected as a cause of acute abdomen acute appendicitis. Alvarado skor score modification in its application is a system simple, fast, scoring with accessibility and low cost. System This scoring also prevents the patient from being exposed to radiation.

Management

Modified scoer Alvarado Based On leukosytosis pbtained 96 people 85.7 % Many open appendicetomy is perfordormed many 16 people (14.3%) with leukocyte count 97 people (86.6%). While appendectomy normal. The results of the study are in line with laparoscopy that is 15 people (13.4%) Samir (2016) at Alexandria Main University at RSUP DR. M. Djamil Padang in 2017 Hospital experienced the most – 2019. eukocytosis that is 66 people (66.0%).10 Total The results of the study are in accordance with Piyaporn leukocytes is a sensitive sign (2015) at Thammasart University Hospital against the inflammatory process.19 Leukocytosis period January 2006 – December 2009 from in acute appendicitis caused by 73 patients with acute appendicitis, it was found that the occurrence of obstruction of the lumen of the appendix The management provided is in the form of causes the serous lining of the appendix open appendectomy is 51 people have edema, so that mucus (69.9%).39 The results of the study are in accordance with produced mucosal experience dam research conducted by Achmad (2011), which causes inflammation and 87 patients were diagnosed infection. Appendix inflammatory process occurs acute appendicitis that is 65 people get due to activation of inflammatory mediators such as open appendectomy, and 22 patients histamine, complement and prostaglandins others received laparoscopic procedures.52 cause leukocytosis.19,48 Similar results were shown by Alvarado score modification is very research conducted by Shimoda (2018) in assist in establishing the diagnosis Tokyo Medical University Japan period acute appendicitis compared to other scores January 2010 – April 2014 of 185 patients such as the RIPASA score. A research study acute appendicitis, the most action in 105 appendicitis patients in the hospital open appendectomy is 93 people India shows that the use of scores (50.27%).53 RIPASA has higher sensitivity Open appendectomy in appendicitis compared to Alvarado's score. However is the most common emergency surgical procedure Alvarado score modification has specificity common in the world.54 Appendectomy Tindakan higher than the score usually used to detect pain press. if this pain is detected then an incision is made at a specific location (appendix) with the incision placed one third of the distasnce from the anterosuperior iliac spine to the umbilicius or known as Mc. Burney point .44 appendectomy is a procedure that most commonly performed by surgeons.55

Acute appendicitis is a condition that most common in the united states, with incidence is about 86 cases per 100,000 per year, appendectomy is the gold standard for acute appendicitis with approx 310,000 actions per year in America in addiction in eurofe, america and australia can reach up to 16%. Population getting appendectomy for acute appendicitis . Selection appendectomy with more laparoscopy less than open appendicectomy, this could be due to the time perform significantly more operations longer than the action time, open appendicectomy for appendicitis stage.

4. CONCLUSION

Research Results about based on characteristics of acute appendicitis patients in RSUP DR.M. Djamil Padang in 2017-2019 then it can be concluded that:

1. Age characteristics of acute appendicitis patients most are age group late adolescence
2. Characteristics gender characteristics most acute appendicitis is male-men, namely 64 people
3. Characteristics of the modified score alvarado the most with a score of 9 (definite acute appendicities) which is 62 person

4. Characteristics of patients management most acute appendicitis open appendectomy is 97 people

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