Comparison between Conservative Treatment Andappendectomy for Managing Appendicular Mass in Children

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Abstract

Appendectomy is considered the first treatment choice for appendicitis. However, controversy existssince conservative therapy is associated with fewer complications than appendectomy for patients with appendicular mass**.** Twenty onechildren underwent to appendectomy (Group I) , and sixty children on conservative therapy (Group II)were included in this study . The study was conducted at Al-Zahra Teaching Hospital in Al-Najaf city, in Iraq , during the period between October 2020 to January 2021 .The results of the current study show that there is a significant difference in laboratory Investigation (p value = 0.04) , Fever(p value = 0.001), hospital stay/ days(p value = 0.02) and duration of symptoms(p value = 0.003) between group I and group II .The study concluded that the appendectomy may result in better outcomes and less complication than conservative therapy in children with appendicular mass .

Keywords : *appendicitis, appendectomy, conservative therapy, children*

Introduction

Appendicular mass is a commonconsequence of acute appendicitis. It is traditionallymanaged by conservative treatmentsucceeded by interval appendectomy. The standard therapy for appendicular mass isappendectomy,for more the last century. While appendectomy is considered as a routine surgerywith low death rates, it can be correlated withpost-operative death[1]. The inflammatory response in AA mightusually be encounteredby the patient's bodyimmune mechanisms, for example by the production ofan inflammation mass (e.g. an appendiceal phlegmon) or a abscess (e.g. an appendiceal abscess)[2] .Current studies have revealed that AAin pediatric patients can be supplied with antibiotics . For different research groups it is valuable to explorethe conservative therapy of AA . In many countries, it is crucial to find out whether this conservativetherapy is safe and influential solution, when there is appendicular mass[3] .

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Childrencoming late in the course ofAAmay be complicated by the formationof an inflammation mass in right iliac fossa. Thisinflammation mass may be composed of the inflammableomentum , appendix and bowel loops. The therapy ofappendicular mass is still controversial, although, there aremany management choices for appendicular mass.In tradition, those childrencan be managedin conservative way followed by interval appendectomyone month later, thinking that an early appendectomyin these cases is risky, requiring more time and mayresult incomplications of life threatening such as faecalfistula[4] .

Some studies preferimmediate appendectomyfor early recoveryand complete treatment[5]. According to the previousstudies, emergency appendectomy in the case ofappendicular mass and abscess is not preferred by many surgeons[6].

In brief, appendicular mass can be managed either operatively or conservatively . More scientific dataarerequired toclarify, which method is more effective. The objective of the present study is to compare between appendectomy and conservative therapy in term of clinical outcomes and complications in patients with

appendicular mass.

Methods

Twenty one children underwent to appendectomy (Group I) , and sixty children on conservative therapy (Group II) were included in this study . The study was achieved at Al-Zahra Teaching Hospital in Al-Najaf City, in Iraq , during the period between October 2020 to January 2021. The following data have been collected : ((Age , gender, Laboratory Investigation , Fever , Intra-operative Findings, Hospital Stay/ Days , Post-operative Complications , Duration of Symptoms)) . Statistical analysis was done by SPSS program (version 25) including both descriptive (frequency and percentage) and inferential statistics (Chi square) .

Results

Table (1) General characteristics and differences between Group I (appendectomy) and Groups II (conservative treatment)

Items	Categories	Group I (Total = 21)		Group II (Total = 16)		P value
		Freq.	%	Freq.	%	
Age / Years	2-5	7	33.3	7	43.8	0.25
	6-9	9	42.9	7	43.8	
	10-13	5	23.8	2	12.5	
Gender	Male	13	61.9	9	56.3	0.45
	Female	8	38.1	7	43.8	
Laboratory Investigation	WBC +ve	8	38.1	9	56.3	0.04
	WBC -ve	13	61.9	7	43.8	
Fever	Yes	16	76.2	15	93.8	0.001
	No	5	23.8	1	6.3	
Intra-operative Findings	Inflammation	11	52.4	Not Applicable		
	Inflammation + Plus	10	47.6			
Hospital Stay/ Days	2-4	20	95.2	12	75.0	0.02
	5-7	0	0.0	4	25.0	
	8-10	1	4.8	0	0	
Post-operative Complications	Yes	6	28.6	Not Applicable		
	No	15	71.4			
Duration of Symptoms	3-5	19	90.5	4	25.0	0.003
	6-7	1	4.8	3	18.8	
	8-10	1	4.8	9	56.3	

Table (1) is about General characteristics and differences between Group I (appendectomy) and Groups II (conservative treatment) . This table shows that the majority of patients were in ages between (6-9) years (42.9% for group I) and (43.8% for group II) , the majority of gender was male (61.9% for group I) and (56.3% for group II) .The results of the current study show that there is a significant difference in laboratory Investigation (p value = 0.04) , Fever (p value = 0.001), hospital stay/ days(p value = 0.02) and duration of symptoms (p value = 0.003) between group I and group II .

Discussion

The traditional treatment of appendicular mass may bethe initial conservativetherapythat may be followed by interval appendectomy toimmediate emergency appendectomy. Anyhow, this approachis not largely accepted and many surgeons still persist to adopt the common traditionalconservative procedure[7]. The immediatesurgicalapproach is well-known to be an effective procedure toconservative therapy for many years as itsignificantlydecrease the total time for hospital stay andavoid the need for a another admission. Thisprocedure decrease the total costsignificantly for both the patients and the hospitals[8]. Theconservative therapyincludes hospitalization,giving fluidsintravenously, having antibiotics, analgesic medications and a strictmonitorof the vital signs and general health of the patient. Inapproximately 11–21% of the patients, it was proven that this procedure may be unsuccessful andthe patients requireimmediate operation because ofdistribution of infection which is relatively moredifficult. Additionally, children may experience arecurrent appendicitis after being exitfrom the hospital[9]. A high number of patientsmay reject to be re-admitted for surgery once their acutedisorderhas beenresolved and this refusal may to be the majorproblems of the initial conservative treatment. The second disadvantage of the conservativetreatment is the probabilityof mistake diagnosis asreported by Garg P and his co-workersconcluding that some conditionssuch as intussusception and caecum cancer may bemanaged conservatively by mistake makingconsiderable deaths. The emergency operation also has a chance of being curative in the indexhospital admission and may ensure early returningof work andhigh compliance[10].

Our studyhave reported that the advantages and activity of immediateappendectomy for managing appendicular mass in terms of outcomes and decreasing hospital stay and complications . These resultsmay agree with a number of previous studieswhich reportedthat early appendectomy procedure to be a moresuitable and effective approach of treating appendicular mass. Advantages of immediateappendectomy include increasing total curative therapy,shortening hospital stay, minimizingdeaths, and patientcompliance[11].

Conclusion

The study concluded that the appendectomy may result in better outcomes and less complication than conservative therapy in children with appendicular mass .

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