

Original article:

Study of Complications of Appendicular Perforation: Observational study

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Abstract:

Introduction: Much effort has been directed towards early diagnosis and intervention as approximately 6% of the population will suffer from this disease during their life time⁽⁷⁾. Delay in diagnosis leads to increase morbidity and costs.

Methodology: This was a prospective clinicopathological study with included 100 cases. This study included randomly all operated patients (100) suspected of appendicular perforation in the Department Of Surgery.

Results: By applying Chi-Square test there is a significant association between Modified Alvarado score and histology report ($p < 0.05$) Overall sensitivity of Alvarado score = 82.8%, specificity = 84.25%, PPV = 98.2% and NPV = 69.01%.

Conclusion: Herewith we conclude to stress that history and clinical examination by a skilled surgeon still remain indispensable in diagnosing appendicular perforation.

Introduction:

Appendicitis is one of the commonest entity and one of the commonest clinical presentations that require emergency surgery is appendicular perforation⁽¹⁻⁵⁾. It is rare amongst the elderly, but is common in children, teenagers and young adults⁽⁶⁾. Much effort has been directed towards early diagnosis and intervention as approximately 6% of the population will suffer from this disease during their life time⁽⁷⁾. Delay in diagnosis leads to increase morbidity and costs.

Methodology:

This was a prospective clinicopathological study with included 100 cases. This study included randomly all operated patients (100) suspected of appendicular perforation in the Department Of Surgery. Ethic committee approval was obtained for it. Sample size was estimated with the help of online sample size estimation calculator.

Patient's selection criteria:

INCLUSION CRITERIA:

- All cases diagnosed as acute appendicitis clinically on admission.
- All patients diagnosed as appendicular perforation clinically on admission.
- All patients diagnosed on laparotomy.
- Patients ready to give informed written consent.

EXCLUSION CRITERIA:

- All cases with either primary peritonitis or that due to anastomotic dehiscence.
- All patients with Intestinal perforation.
- All patients not willing for operative procedure.

Methodology:

Clinical signs of appendicular perforation determined by the surgeons and the duration of the symptoms were documented on admission. An informed consent was obtained from all registered cases.

In all patients with pain in right iliac fossa the provisional diagnosis of appendicular perforation was made on the basis of history, clinical signs and relevant clinical data.

Among 100 cases of operated appendectomy in this study patients age group ranged from 0-10 to 90 years. Maximum group of patients belonged to 11 to 20 years(42 patients i. e, 42%)

Among 100 patients of operated appendectomy in this study, 25 were female (25%)and 75 were male (75%).Out of total 100 operated patients 91 patients diagnosed as HPE positive (91%)Rest 9 patients had HPE negative (normal appendix)i. e, 9%.The negative appendectomy rate in this study is 9%

Results:

Table No. 1 Post operative complication

Complication	wound infection	Soakage	paralytic ileus
no of patients	8	3	3

Table no 2. Modified Alvarado score and HPE report

Modified Alvarado score	Histology report		Total
	Positive	Negative	
>7	68	2	70
<7	18	12	30
Total	86	14	100

Value of $\chi^2 = 47.06$, $p < 0.05$, significant

By applying Chi-Square test there is a significant association between Modified Alvarado score and histology report ($p < 0.05$)

Overall sensitivity of Alvarado score = 82.8%, specificity= 84.25%, PPV= 98.2% and NPV = 69.01%.

Discussion:

In our study total 100 patients underwent appendectomy out of which 14% developed complication. Most common POC – wound infection (in 8 patient), 3% had soakage and 3% had paralytic ileus. This study was done in Department of General Surgery, Pravara Institute of Medical Sciences.

Clinical signs of appendicular perforation determined by the surgeons and the duration of the symptoms were documented on admission. An informed consent was obtained from all registered cases.

In all patients with pain in right iliac fossa the provisional diagnosis of appendicular perforation was made on the basis of history, clinical signs and relevant clinical data. Among 100 cases of operated appendectomy in this study patients age group ranged from 0-10 to 90 years. Maximum group of patients belonged to 11 to 20 years(42 patients i. e, 42%) Among 100 patients of operated appendectomy in this study, 25 were female (25%)and 75 were male (75%).Out of total 100 operated patients 91 patients diagnosed as HPE positive (91%)Rest 9 patients had HPE negative (normal appendix)i. e, 9%.The negative appendectomy rate in this study is 9%. By applying Chi-Square test there is a significant association between Modified Alvarado score and histology report ($p < 0.05$) . Overall sensitivity of Alvarado score = 82. 8%, specificity= 84. 25%, PPV= 98. 2% and NPV = 69. 01%.

Conclusion:

Herewith we conclude to stress that history and clinical examination by a skilled surgeon still remain indispensable in diagnosing appendicular perforation.

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