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Surgery

INCIDENCE OF POST OPERATIVE INTESTINAL OBSTRUCTION IN PMCH, PATNA

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KEYWORDS :

INTRODUCTION

The incidence of post operative intestinal obstruction is increasing because of increase in the number of abdominal operations. With the advent of newer potent antibiotics, the abdominal operations are being done in presence of sepsis too. Main cause of post operative intestinal obstruction is formation of adhesions , but mechanism of its formation is far from clear and we cannot predict which patient will get this complication and when, the present study presents the clinical experience of this condition at Patna medical college hospital.

MATERIAL AND METHOD:

This study was carried out on 68 cases of acute post-operative intestinal obstruction admitted to surgical casualty at Patna medical college Hospital, Patna from June 2017 to November 2018 . In 50 cases previous operations were performed elsewhere. Remaining 15 cases were operated in department of surgery (all on emergency basis). Each case was managed as following Detail history taking especially the type of previous abdominal operation . In 60 cases the previous papers were available, in remaining 8 the cause was derived from the history, thorough clinical examination, laboratory and x-ray studies and the treatment proper – conservative or surgery after proper resuscitation. All cases except those with suspected gangrene were given at least 12 hours conservative trial in the form of naso-gastric suction , iv –fluids , prophylactic antibiotics and metronidazole infusion . Enema were given twice successively. Close monitoring was done in critically ill e.g urinary output , serum electrolyte ,urea and creatinine estimation . In suspected intra-abdominal gangrene exploration was done at earliest. failure of conservative treatment over 12 to 24 hours constituted indication for exploration.

Laparotomy was mostly done through a RPM incision under general anesthesia , the full morbid anatomy and pathology noted , corrective procedure done , thorough peritoneal toilet done , drains provided whenever indicated and laparotomy wound closed . Early ambulation and post-operative breathing exercises were noted and post-operative course noted.

RESULT :

During the period June 2017 to November 2018, 2280 laparotomy were performed in surgical department of P.MC.H. PATNA of which 626 (27.4 %) were cause of intestinal obstruction . Among 626 cases 68 obstruction were post-operative. The youngest patient was 3 and oldest was 74 year, mean age being 46.7 years. There were 44 males and 24 females 8 of which had undergone gynecological surgery (8 cases). Of these 5 cases were considered 'clean' , 10 contaminated and remaining 45 were frankly infected . In 8 cases previous papers were not available. Most of the cases presented with combination of symptoms and signs like pain , vomiting , absolute constipation , abdominal distension , tender mass , hyperperistalsis or silent abdomen . Fever , leukocytosis and free fluid in peritoneal cavity were sometimes present. The symptom free interval from original operation was variable. 15 patients belonged to early type within 2 weeks, remaining 53 belonged to the delayed type, of former group 10 were explored, while still were in hospital , the rest returned to hospital 5-9 days after discharge . Of the delayed group all patient had been treated for varying periods (4 to 16 hrs) at peripherals hospitals before being referred to us .Obstruction was simple in 55 cases (80.8%) and strangulation in 13 cases (19.1%). 14 cases responded to conservative treatment alone . Of the 54 re-operated cases, lysis alone sufficed in 46, only 8 cases bowel resection and anastomosis was done . Of the lost 6 cases (mortality 8.8%) 4 underwent resection and anastomosis for gangrenous bowel and remaining 2 were brought to hospital in precarious condition.

DISCUSSION :

Fibrin formation and its organisation is the basic pathological process involved in formation of post –operative adhesions . There is a delicate balance between host tissue defense mechanism , environment and the insult leading to successful resolution of fibrin .Sharif H Ellozy et al (2002) suggested that most of the adhesions are man made . Among different insulting factors infections appears to be most important (Ronald M.Stewart et al 1987)

In the present series 5 clean cases developed obstruction. They were however malnourished and were operated at peripheral hospitals. Rest of the cases belonged to contaminated (10 cases) or frankly infected group (45 cases) . In 8 cases previous papers were not available and the history suggested emergency operation. In our hospital few drops of povidon iodine is frequently used diluted in normal saline in emergency infected cases, to minimize intraperitoneal bacterial population and to washout fibrin rich exudates. Sharif H Ellozy et al (2002) blamed local application of chloramphenicol in 44% of his reported cases for adhesion formation. Antibiotics are hardly used as local application now. Our observation is contrary to the authors. In majority the previous operation responsible was an emergency one and in vast majority infection was present. If chemical irritation was primary cause, elective and emergency operations should have almost equal incidence. presence of infection is thus more important factor Much p jr (1987) also considered sepsis a more important factor than anti microbials.

No age is immune to this condition. Highest incidence was found in 5th decade which is similar to observation of Much p jr (1987). In general surgical group males predominated. Presence of infection rather than type of previous operation is more important for post operative adhesion formation . appendicectomy and gynecological infection were frequently blamed in past. But Much p jr (1987) held infection as offending factor. Klin Khir. (1993) advocated exploration after a trial of 12 hours . 54 cases of the present series underwent exploration after varying periods of conservative trial upto 16 hours . In majority (36 cases) ileum was involved , followed by jejunum (12 cases) , transverse colon (6 cases). Much p jr (1987) observation were similar to , during exploration in in most (46) of the cases lysis of the adhesion was all that required to relieve the obstruction . In only 8 cases resection and anastomosis was required , because of the strangulation and impending gangrene . Thorough peritoneal lavage was done , Lomodex in saline was poured into the peritoneal cavity empirically before closing the cavity empirically before closing the abdomen . Much p jr (1987) also emphasized the importance of thorough mechanical cleaning of the peritoneum , to minimize the incidence of post-operative adhesion formation .

The low mortality (8.9%) and the negligible morbidity in the present series is comparable to that of Much p jr 1987 (8%).

SUMMARY & CONCLUSION:

Post-operative intestinal obstruction is a common problem , and its incidence can be minimized by meticulous surgical technique and control of peritoneal infection and irritation . Adequate conservative treatment trail and timely surgical intervention reduces mortality and prevents morbidity .

REFERENCES

1. Ahrenholz, D.H., Simmons, R.L. 1980. Fibrin in peritonitiis, I. Beneficial and adverse effects of fibrin in experimental E.coli Peritonitis. Surgery, 88: 44.

2. Altemeier, W.A., Culbertson, W.R., Fullen, W.D., David, Shook, C. 1973. Intraabdominal abcesses. *Am J Surg.* 125: 70.
3. Das, S. 1999. A concise textbook of surgery. 2nd Edition, Dr.S.Das, 992-993.
4. Dixon, C.F. Rixford, E.L. 1934. Cytologic Response to peritoneal irritation in man : A protective mechanism. A protective mechanism. *Am J Surg.,* 25:511.
5. Dorairajan, L.N., Gupta, S., Deo, S.V., Chumber, S., Sharma, L. 1995. Peritonitis in India – A decades experience. Trop Gastroenterol. Jan-March; 16(1): 33-8.
6. Dunn, D.L., Barke, R.A., Ahrenholz, D.H. et al. 1984. The adjuvant effect of peritoneal fluid in experimental peritonitis. *Ann Surg*. 199: 41,42.
7. Dunn, D.L., Barke, R.A., Ewald, D.C., Simmons, R.L. 1987. Macrophages and translymphatic absorption 'represents the first line of defense of the peritoneal cavity. Arch. Surg., 122:105.
8. Ellis, H. 1982. The causes and prevention of intestinal adhesions. *Br J Surg.,* 69: 241-3.
9. Ellis, H., Harrison, W., Hugh, T.B. 1965. The healing of peritoneum under normal and abnormal conditions. *Br J Surg.,* 52:471-6.
10. Els Th M Dams, Michel MPJ reijnen, Wim JG Oyen, Otto C, Boerman, Peter Laverman, Geet Storm, Jos WM, Van Der Mee R, Frans HM .
11. Fang, C.C., Yen, C.J., Tsai, T.J., Chen, R.H., Lee, P.H., Tomino, Y. 2003. Antibiotics induce apoptosis of human peritonitis mesotheilial cell. Nephrology(Carlton). Jun;8(3): 142-149.
12. Hoffman, J. peritoneal lavage as an aid in the diagnosis of acute peritonitis of non-traumatic origin. Dig Dis. 1988: 6(4):185-93.
13. Inderbir Singh. Introduction to human embryology. 2nd Edition. P. 218-219.
14. Jeremy Hugh Baron. 2000. 13 Peptic Ulcer. *The Mount Sinai Journal of Medicine*. January, Vol. 67: 58-61.
15. Kakar, A., Aranya, R.C., Nair, S.K. 1983. Acute perforation of small intestine due to tuberculosis. *Aust NZ J Surg*.1983 Aug; 53(4): 381-3.
16. Kimchi, N.A., Broide, E., Shapiro, M., Scapa, E. 2002. Non-traumatic perforation of the small intestine- Report of 13 cases and review of the literature. Hepatosplenomegaly. 49(46): 1017-22.
17. Leak, L.V. 1983. Interaction of mesothelium to intraperitoneal stimulation. Lab invest., 48:479.
18. Lloyd, M. Nyhus, Robert, J. Baker, Josef, E Fischer. 1997. Mastery of Surgery. 3rd edition. Little Brown and Company., Vol. 1: 146-154.
19. Macro Coppola, Patric Gallius. 2001. Life-threatening upper GI emergencies, Part-2: Upper GI bleeding and perforation – Brief Article. *Journal of Clinical Illness.,* 16(8): 367-373.
20. Michael, J. Zinner, Seymour, I. Schwartz, Harold Ellis, Stanley, W Ashley, David W MacFadden. a
21. Michel, M.P., Reijnen, J., Jacques, F., Meis, G.M., Victor, A., Postma, 1999. Harry Van Goor. Prevention of intra-abdominal abcesses and adhesions using a hyaluronic acid solution in a rat peritonitis model. *Arch Surg.,* 134:997-1000.
22. Navez Tassati, Scohy, Mutter, Guiot, Evarard et al. Laproscopic management of acute peritonitis. *British Journal of Surgery*. Jan; 85(1):32-36.
23. Onderdonk, A.B., Moon, N.R., Kasper, D.L., Barlett, J.G. 1978. Adherence of bacteroides Fragilis in vivo. Infect Immun. 19: 1083-87.
24. Opie, E.L. Inflammation in serous cavities –Definition and management. *Arch Pathol*.196: 78: 1
25. Peter, L. Williams, Lawrence, H. Bannister, Martin, M. Berry, 2000. Patricia Collins, Mary Dyson, Julian E Dussek, Mark WJ, Ferguson. Gray's Anatomy, 38th Edition. Churchil Livingston: 1734-1735.
26. Porter, J.M., McGregor, F.H., Mullen, D.C., Silver, D. 1969. Fibrinolytic activity of the mesothelial surfaces.Surg Forum. 20:80.
27. Raftery, A.T. 1973. Regeneration of parietal and visceral peritoneum: A light microscopical study. *Br J Surg*., 60
28. Ronalnd M. Stewart et al : The American Journal of Surgery Volume 154, Issue 6, December 1987, Pages 643–647
29. Sharif H. Ellozy MD et al Diseases of the Colon & Rectum September 2002, Volume 45, Issue 9, pp 1214-1217
30. Mucha P Jr et al Surg Clin North Am. 1987 Jun;67(3):597-620.Klin Khir. 1993;(4):20-2. Russian.