CLINICAL STUDY OF MANAGEMENT OF MALIGNANT LARGE BOWEL OBSTRUCTION

Dr. Haymun Oo

Surgical Ward

EAST YANGON GENERAL HOSPITAL

Background

- Challenging disease for the surgeons as well as the patients

- Purpose - to review the management of malignant large bowel obstruction in Yangon General Hospital (YGH) and New Yangon General Hospital (NYGH)

INTRODUCTION

- One dilemma a surgeon may occasionally face is the patient with malignant bowel obstruction (MBO) which may present as an initial presentation or recurrence

- MBO is a disease with a poor prognosis, particularly in patients with advanced bowel or gynecological cancers.

Resection of the tumor is the '**Gold Standard**' for the treatment of malignant colonic obstruction, even though emergency surgery is associated with significant risk of morbidity and mortality, and with a high percentage of stoma creation than in elective surgery. Age, advanced disease, malnutrition, and deterioration in the general stage are also considered factors of poor prognosis even in cases where surgery may technically be possible.

Tuca et al, 2012

- After self-expanding endoluminal colonic stents had been introduced in the therapeutic armamentarium to relieve distal colonic obstruction, surgery is proposed as a second-stage definitive treatment once the acute obstruction has been resolved.

(Frago *et al,* 2014)

- But endoscopic stenting was not being uniformly available at all emergency departments.

“One final consideration in management of malignant large bowel obstruction is the timing of the intervention and the type of operation proposed.”

AIM

- To study management of malignant large bowel obstruction in Yangon General Hospital and New Yangon General Hospital.

OBJECTIVES

- To find out demographic features
- To identify the sites of obstruction
- To describe types of treatment and outcomes

MATERIALS AND METHODS

- Hospital-based prospective study in YGH & NYGH

STUDY

- 1st January, 2015 to 31st December, 2015

PERIOD

- documented ...

PROCEDURE

RESULTS

Table (1) Age distribution in Malignant Large Bowel Obstruction

Age Group (years)	Number	%
≤ 20	1	1
21 – 30	9	13
31 – 40	11	16
41 – 50	14	20
51 – 60	11	16
61 – 70	19	27
71 – 80	3	4
≥ 80	2	3

Figure (1) Sex Distribution of Malignant Large Bowel Obstruction

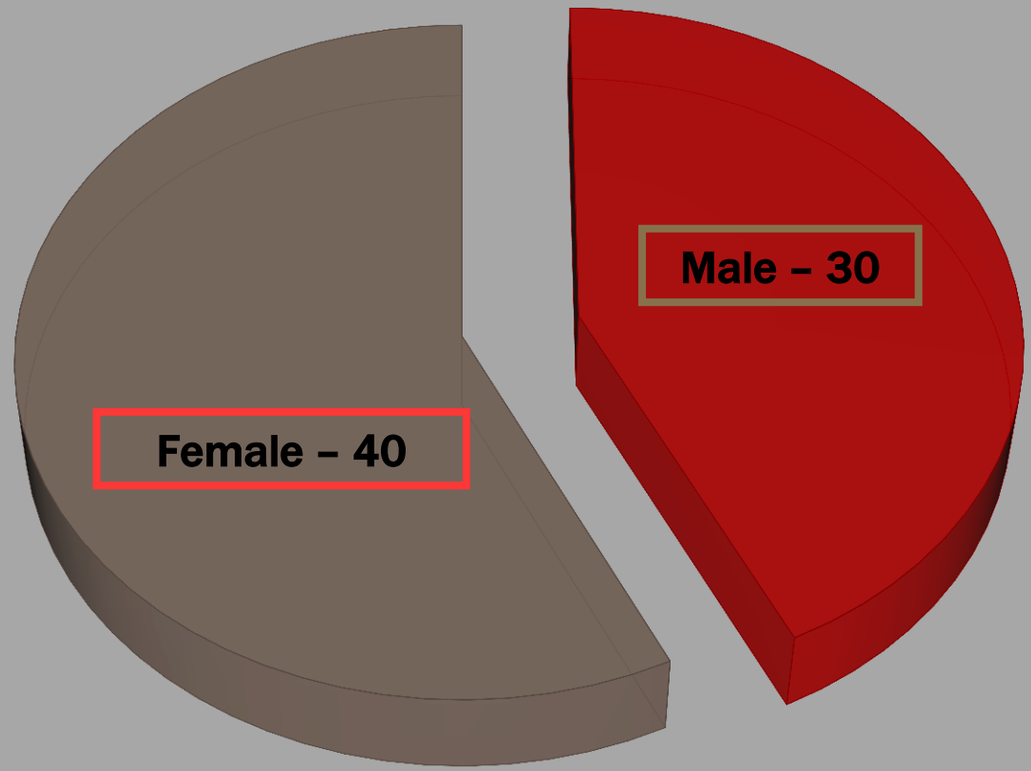


Table (2) Sites of Malignant Large Bowel Obstruction

Proximal Colon (29%)			Distal Colon (71%)		
Caecum	6	9 %	Descending colon	8	11%
Ascending colon	5	7%	Sigmoid colon	7	10%
Hepatic flexure	1	1%	Rectosigmoid junction	10	14%
Transverse colon	4	6%	Rectum	25	36%
Splenic flexure	4	6%			

Table (3) Tumor Cell Types in proximal and distal malignant large bowel obstruction

	Proximal Colonic Obstruction	Distal Colonic Obstruction	Total n=70
Adenocarcinoma	18	49	67
Carcinoid Tumor	2	0	2
GIST	0	1	1
Lymphoma	0	0	0

Figure (2) Tumor Cell Types in malignant Large bowel obstruction

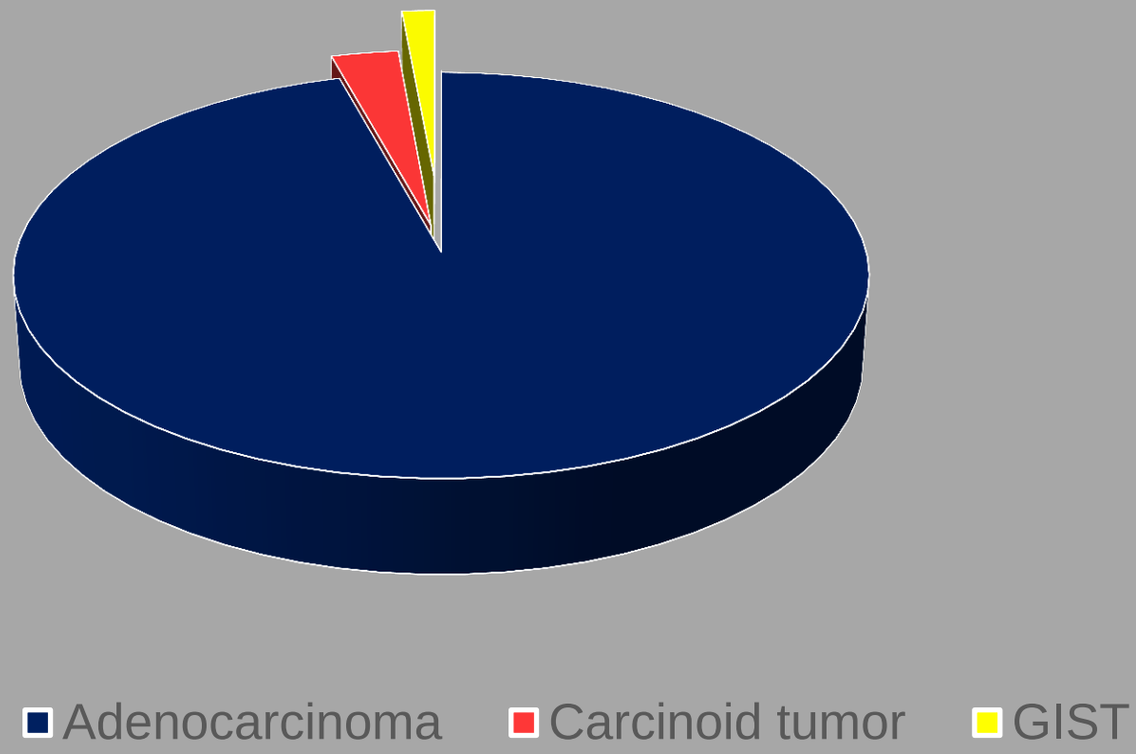


Table (4) Histological Grading

	Proximal Colonic Obstruction (n=20)	Distal Colonic Obstruction (n=50)	Total (n=70)
Well Differentiated	1 (6%)	0	1 (2%)
Moderately Differentiated	8 (44%)	25 (53%)	33 (50%)
Poorly Differentiated	9 (50%)	23 (48%)	32 (48%)

Table (5) AJCC Staging in malignant large bowel obstruction

	Proximal Colonic Obstruction (20 patients)		Distal Colonic Obstruction (50 patients)		Total (70 patients)
Stage I	-	-	-	-	-
Stage II	5	25 %	13	26 %	18 (26%)
Stage III	9	45 %	23	46 %	32 (46%)
Stage IV	6	30%	14	28 %	20 (28%)

Figure (3) Types of operations in proximal colonic bowel obstruction

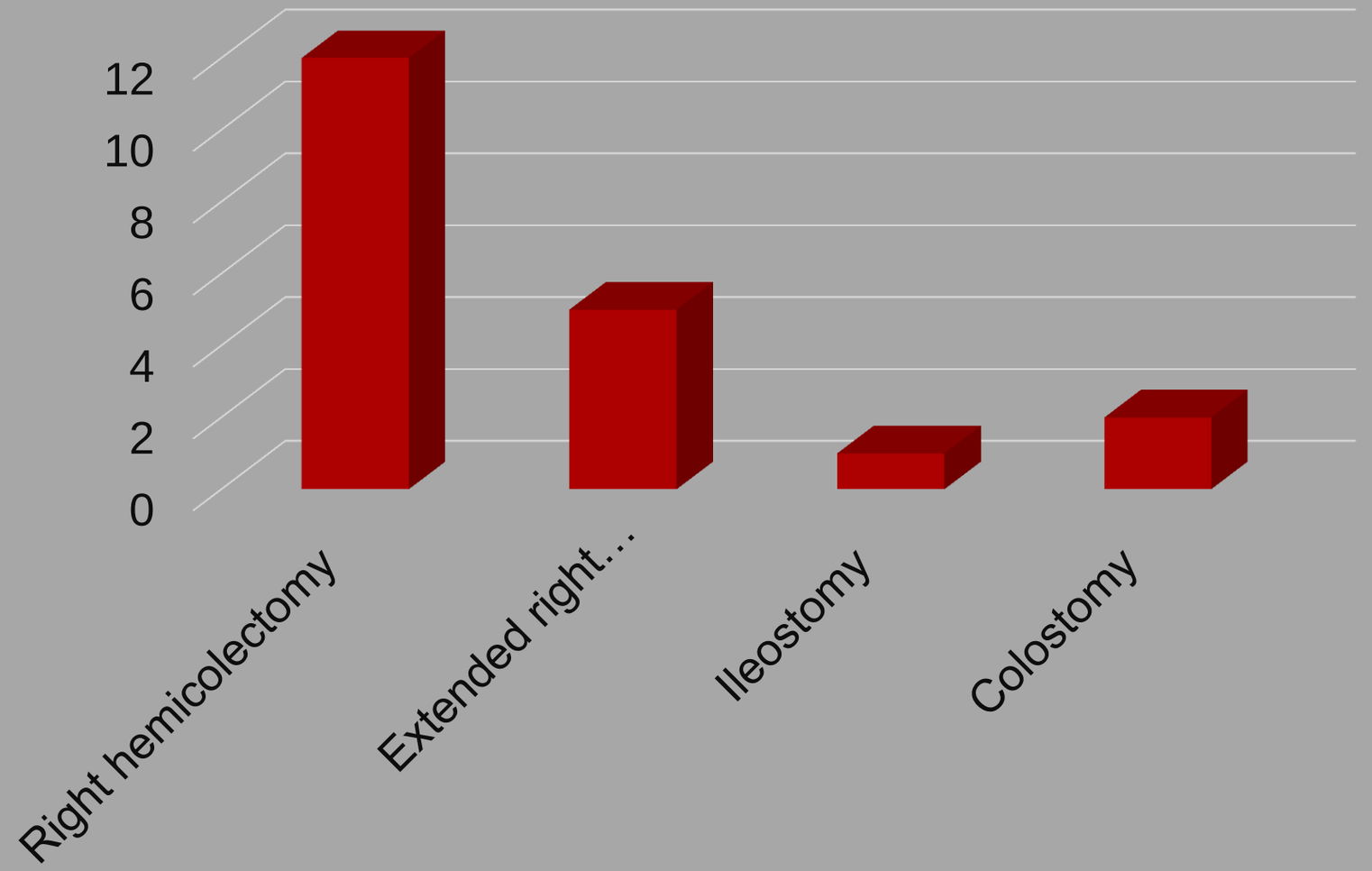


Figure (4) Types of Operations in Distal Colonic Bowel Obstruction

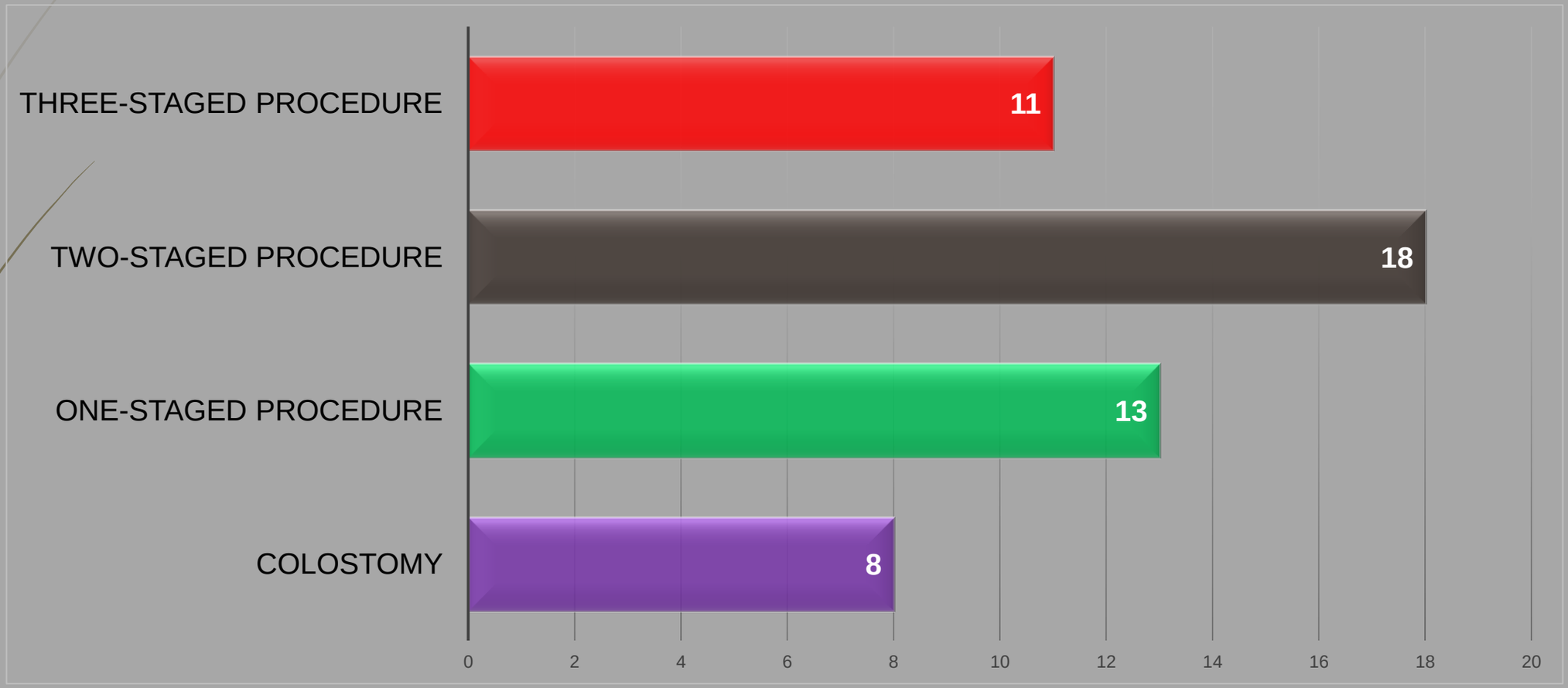
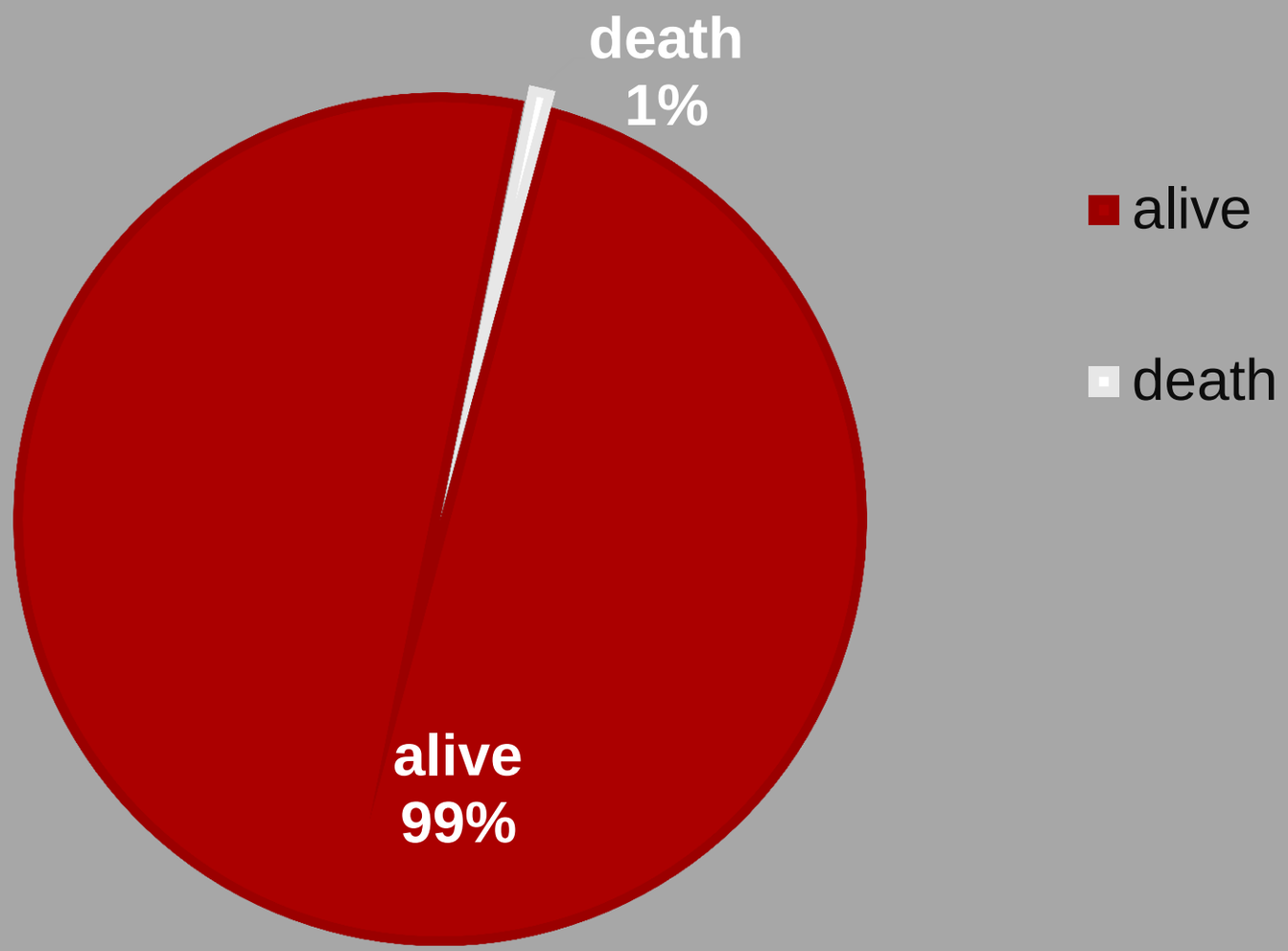


Table (6) Post-operative complications

	Proximal Colonic Obstruction (20 patients)		Distal Colonic Obstruction (50 patients)		Total (70 patients)
Superficial wound infection	2	10%	6	12 %	8 (11%)
Burst abdomen	1	5%	2	4 %	3 (4%)
Anastomotic leakage	1	5%	1	2%	2 (3%)
Complications due to NCDs	5	25%	6	12 %	11 (16%)

Figure (5) Mortality of malignant large bowel obstruction



DISCUSSION

- Common cause of bowel obstruction in YGH and NYGH and it was also surgical emergency.
- According to the advanced nature of the disease, frequently occurrence in elderly patients with co-morbid diseases made the treatment plans and outcomes of the malignant large bowel obstruction.

- The most commonest age group was 61-70 years age group as the study of Kleespies *et al*, 2009.
- The median age was 65 years old.
- Youngest age - 19 years old man with carcinoma rectum lower 1/3 who was only treated with sigmoid loop colostomy for his advanced nature of the disease.
- The oldest one was 89 years old female with rectosigmoid carcinoma with partial intestinal obstruction who underwent Hartmann’s operation.

- For sex distribution, there was no significant difference between male and female, only (1:1.3) and this was same with other studies

- In Biondo *et al*, 2004, the commonest site of proximal colonic bowel obstruction was the **ascending colon** (20.5% of colonic obstruction) which was followed by the caecum (5.5 % of colonic obstruction).
- But**,** **caecum** was the commonest in this study which was 6 out of 20 patients in proximal colonic bowel obstruction which was followed by ascending colon (5 patients).
- This might be due to the different sample sizes and limitation in the study period.

- Although the most common obstructing site is sigmoid colon according to Fargo et al, 2014, rectum was the most common site in this study.
- This also might be variation in identification of the situation of the tumors due to the advanced nature of the diseases and most of the tumor which occurred in the rectum were situated in the upper one-third of the rectum.

- Similar with other studies, 96 % of the tumor cell type was adenocarcinoma.
- Common types are moderately differentiated and poorly differentiated adenocarcinoma.
- Quayle F.J and Lowney J.K (2006) stated that lymphoma was only found in less than 1% of colorectal malignancies. That was quite similar with this study because lymphoma was not found in both proximal and distal colonic bowel obstruction.
- Most of the tumors was staged as III according to AJCC classification.

- 75 % of proximal colonic bowel obstruction were treated with right hemicolectomy (60%) or extended right hemicolectomy (25%).
- There were 2 patients who were treated with colostomy. Among them, one was due to the recurrence obstruction in transverse colon who was previously operated sigmoidectomy. Another patient was 64 years old male with obstruction at splenic flexure who underwent transverse colostomy only because he was unfit for anaesthesia in emergency setting.
- Ileostomy alone was uncommon procedure in proximal bowel obstruction and that was done in one elderly female patient with advanced carcinoma ascending colon with comorbid diseases.

- In distal colonic bowel obstruction, the commonest operation was two-staged procedure (36% of distal colonic bowel obstruction) which was due to advanced nature of the tumors and hospital guideline.
- Stents were not widely available in these hospitals, the use of the stents were not noted in this study.

- In compared with the small intestinal obstruction, large bowel obstruction had increased in postoperative complications.
- In compared with the study of Frago et al (2010), post-operative complications in this study were reduced. This might be due to choice of operation, sample size difference and different study period.
- Most of the complications were due to non communicable and some are preventable diseases such respiratory complications, renal failure or liver failure, sometimes consequence of the disease like deep vein thrombosis, multi organ failures, catheter-related urinary tract infections as similar as previous study, Kleespies A et al, 2009.

- Mortality of malignant large bowel obstruction in this study was only 1.4% in compared with the previous studies 18.8% in Biondo et al, 2004 and 9 % in Frago et al, 2014.
- This might be due to reduced sample size, choice of operations according to hospital guideline and improvement in patient care.

TAKE HOME MESSAGE !

“

IT IS NOT UNCOMMON DISEASE.

”

“

Depending on age, sites, presenting symptoms and comorbid diseases → treatment options varied

”

“

NEVER SAY TOO YOUNG !

”

“

Awareness of disease was also lacked → advanced nature of disease → POOR PROGNOSIS

”

CONCLUSION

- Although study had many limitations such as the studied population, limited resources and unavailable treatment option like stenting, this study might help the distribution of malignant large bowel obstruction, treatment options and outcomes of malignant large bowel obstruction in Yangon General Hospital and New Yangon General Hospital, Yangon, Myanmar for further advanced studies.

REFERENCES

- Aadam, AA. and Martin, JA. (2013). Enteral stents in malignant bowel obstruction. *Gastrointestinal Endoscopy Clinic of North America*, 23(1), pp. 153–164.
- Ansaloni, L., Andersson, RE., Bazzoli, F., Catena, F., Cennamo, V., Saverio, SD., Lorenzo, F., Jeekel, H., Leppäniemi, A., Moore, E., Pinna, AD., Pisano, M., Repici, A., Sugarbaker, PH. and Tuech, JJ. (2010). Guidelines in the management of obstructing cancer of the left colon: consensus conference of the world society of emergency surgery (WSES) and peritoneum and surgery (PnS) society. *World Journal of Emergency Surgery*, 5(29), pp. 1-10.

- Biondo, S., Parés, D., Frago, R., Martí-Ragué, J., Kreisler, A., Oca, D. and Jaurrieta, E. (2004). Large Bowel Obstruction: Predictive Factors for Postoperative Mortality. *Diseases of the Colon & Rectum*, 47(11), pp. 1889 –1897.
- Bevan, K., Chand, M. and Cecil, T. (2010). Acute Colonic Emergencies. *SURGERY*, 28(11), pp. 536-543.
- Bowel Cancer Australia [online] Available at http://www.bowelcanceraustralia.org/youre-never-too-young

- Bullard, KM. and Rothenberger, DA. (2006). Colon, Rectum and Anus. In: *Schwartz's Manual of Surgery*, 8th ed, pp. 732-733.
- Chen, H., Huang, C., Chang, Y., Dai, MS., Ho, CL., Chen, YC., Chao, TY. and Kao, WY. (2014). Malignant bowel obstruction: A retrospective clinical analysis. *Molecular and Clinical oncology*, 2(1), pp. 13-18.
- Cuffy, M., Abir, F., Audisio, RA. and Longo, WE. (2004). Colorectal cancer presenting as surgical emergencies. *Surgical Oncology*, 13(2-3), pp. 149–157.

- Dohmoto, M., Rupp, KD. and Hohlbach, G. (1990). Endoscopically-implanted prosthesis in rectal carcinoma. *German Medizinische Wochenschrift*, 115(23), p. 915.
- Edge, S., Byrd, Compton, CC., Fritz, AG., Greene, FL. and Trotti, A. (2010). *AJCC Cancer Staging Manual*, 7th eds: Springer-Verlag: New York.
- Frago, R., Ramirez, E., Millan, M., Kreisler, E., Valle, E. and Biondo, S. (2014). Current management of acute malignant large bowel obstruction: a systematic review. *The American Journal of Surgery*, 207(1), pp. 27 –138.

- Gainant, A. (2012). Emergency management of acute colonic cancer obstruction. *Journal of Visceral Surgery*, 149(1), pp. e3–e10.
- Helyer, K., Law. L., Butler, M., Last Linda, D., Smith, A. and Wright, C. (2006). Surgery as a Bridge to Palliative Chemotherapy in Patients with Malignant Bowel Obstruction from Colorectal Cancer. *Annals of Surgical Oncology*, 14(4), pp. 1264 –1271.
- Helyer, L. and Easson, A. (2008). Surgical approaches to Malignant Bowel Obstruction. *Journal of supportive oncology*, 6(3), pp. 105 –113.

- Quayle, F. and Lowney J. (2006). Colorectal Lymphoma. *Clinic in Colon and Rectal Surgery*,19(2), pp. 49-53
- Rahbari, N., Knebel, P., Kieser, M., Bruckner, T., Bartsch, DK., Friess, H., Mihaljevic, A., Stern, J., Diener, K., Voss, S., Rossion, I., Buchler, M. and Seiler, CM. (2012). Design and current status of CONTINT: continuous versus interrupted abdominal wall closure after emergency midline laparotomy – a randomized controlled multicenter trial [NCT00544583]. *Trial*, 13(72), pp. 1-9.

- Spinelli, P., Dal, M. and Mancini, A. (1992). Self-expanding mesh stent for endoscopic palliation of rectal obstructing tumors: a preliminary report. *Surgical Endoscopy*, 6(2), pp. 72–4.
- Trompetas, V.(2008). Emergency Management of Malignant Acute Left-sided Colonic Obstruction. *Annals of Royal College of Surgeons of England*, 90(3), pp-181-186.
- Tuca, A., Guell, E., Emilio, M. and Codorniu, N. (2012). Malignant bowel obstructions in advanced cancer patients: epidemiology, management, and factors influencing spontaneous resolution. *Cancer management and research*, 4, pp. 159-169.

- Tun-Tun-Thein (2012) *Predictive factors for surgical intervention in patients with adhesive small bowel obstruction*. M.Med.Sc (Surgery) dissertation, University of Medicine 1, Yangon.
- Villar, J., Martinez, A., Villegas, M., Muffak, K., Mansilla, A., Garrote, D. and Ferron, J. (2005). Surgical options for malignant left-sided colonic obstruction. *Surgery Today*, 35(4), pp. 275-281.
- World Health Organization (2015) . WHO official website. [online]. Available at http://www.who.int/mediacentre/factsheets/fs355/en/

Williams, NS., Bulstrode, C. & O'Connell, P. (2013), The small and large intestine. In: *Bailey & Love's Short practice of surgery*, 26th eds, pp. 1143-1180. CRC Press, London.

- Williams, NS., Bulstrode, C. & O'Connell, P. (2013), The small and large intestine. In: *Bailey & Love's Short practice of surgery*, 26th eds, pp. 1181 - 1198. CRC Press, London.
- Williams, NS., Bulstrode, C. & O'Connell, P. (2013), The small and large intestine. In: *Bailey & Love's Short practice of surgery*, 26th eds, pp. 1215-1235. CRC Press, London.

THANK YOU!


EIGHTYBY2018
SCREENING SAVES LIVES
Reaching 80% screened for colorectal cancer by 2018


March
COLON CANCER
AWARENESS MONTH
✓Preventable
✓Treatable
✓Beatable
#SharedCares