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Original article

Surgical Management of Colonic Trauma: a Thai Perspective and Outcomes

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Abstract The management of colonic injuries has evolved substantially from conservative care to surgical intervention, with progressive improvements in techniques and outcomes. Nevertheless, injury severity remains a significant challenge, particularly when concurrent trauma to other organs increases complication and mortality rates. The selection of surgical strategy, whether primary repair or diversion procedure, is contingent upon injury severity and patient-specific factors. This study aimed to characterize the epidemiological profile and clinical outcomes of traumatic colonic injuries in Thailand and to compare postoperative outcomes between damage control surgery (DCS) and non-DCS management approaches. This retrospective study analyzed 77 patients diagnosed with colonic injuries (ICD10th: S365, S3650, S3651) admitted to Pranangklao Hospital and Maharat Nakhon Ratchasima Hospital between October 1, 2020, and September 30, 2023. The majority of patients were male (77.9%), of working age, and younger compared to populations with firearm-related injuries. Motor vehicle accidents were the predominant cause (74.0%), resulting in blunt trauma (80.5%) more frequently than penetrating trauma (19.5%). The most commonly injured site was the transverse colon (33.8%). The distribution of colonic injury grades was as follows: grade 1 (59.7%), grade 2 (5.2%), grade 3 (10.4%), grade 4 (10.4%), and grade 5 (14.3%). The overall mortality rate was 20.8% (16/77; 95% CI: 12.4-31.5). Colonic-related complications occurred in 7.8% of patients (6/77; 95% CI: 3.6-15.8). Primary repair was the predominant surgical approach (92.2%, 71/77; 95% CI: 83.4-96.6), while diversion procedures were performed in 7.8% (6/77; 95% CI: 3.4-16.6). Among patients with grade 5 injuries, 81.8% (9/11) underwent primary repair. This study supports primary repair as the first-line treatment for colonic injuries, even in cases of severe destructive trauma (grade 5).

***Keywords*: colonic injury; surgical outcome; primary repair of colon**

Introduction

The colon is a frequently injured organ within the abdominal cavity.[1-8] A significant majority (over 90%) of injuries in previous studies were classified as penetrating. Colonic injuries have demonstrated a low associated mortality rate, historically ranging from 2% to 12%.[9] Nevertheless, the presence of concomitant abdominal injuries is associated with an increased incidence of complications and mortality.[10-11] The outcome of treatment is significantly influenced by the time to surgery and the selection of an appropriate surgical approach for colonic injuries.[12]

The history of managing colonic injuries serves as a testament to the advancement of medical care, particularly surgical interventions. During periods of conflict, when penetrating trauma caused extensive damage to internal organs, the primary approach to treating colonic injuries was conservative management, leading to a mortality rate ranging from 65% to 90%.[8] Surgical interventions were introduced for treatment during World War I and II, however, the limited advancement of surgical techniques resulted in a high mortality rate of 30-70%.[12-14] The implementation of rapid resuscitation and evacuation protocols, combined with timely surgical decision-making and improved post-operative care, during the Korean and Vietnam Wars contributed to a significant reduction in mortality rates from colonic injuries, decreasing to 10-15%.[14] In the present day, mortality rates for colonic injuries in civilians have significantly decreased. Almost all penetrating colonic injuries have a mortality rate of less than 5%.[1,4,7,15,] In a study conducted by Woodhall JP et al.[16], primary repair surgery (primary suturing of the colonic wound or resection with primary anastomosis) was shown to significantly reduce mortality rates from 23% to 9%. Consequently, this surgical approach gained widespread adoption as the preferred treatment.[2,5,15] However, the criteria for primary repair remain somewhat unclear. A study by Stone and Fabian[5] found that patients with a systolic blood pressure below 80 mmHg, more than 20% blood loss (greater than 1 liter), injuries to more than two abdominal systems, severe or gross fecal contamination, a delay in surgery of more than 6 hours, extensive colonic injuries requiring resection, and loss of abdominal wall were at higher risk of infection and complications following primary repair compared to diversion procedures (colostomy or ileostomy). However, when considering patients with less severe injuries, primary repair yielded better outcomes with lower rates of infection and complications. A study by Thomson and Moore[15] found no significant difference in outcomes between primary repair of left-sided and right-sided colonic injuries. However, the criteria for primary repair remain somewhat unclear. It is important to note that the majority of existing literature is based on penetrating trauma (gunshot/stab wounds) from Western countries. In contrast, the etiology and patient profile in Thailand, and much of Asia, are profoundly different, dominated by blunt trauma from road traffic accidents. This difference raises questions about the applicability of international guidelines in this specific context. Furthermore, there is a notable lack of data from Thai trauma centers. This study aims to address this gap by utilizing data from two major trauma centers in Thailand: Maharat Nakhon Ratchasima Hospital, a Level I Trauma Center serving the Northeastern region, and Pranangklao Hospital, a Level II Trauma Center in the metropolitan area. These institutions are

representative of the trauma care systems in both regional and urban settings of Thailand. Their diverse patient demographics and injury patterns provide a comprehensive overview of colonic injury management in the country, enhancing the generalizability of our findings.

Primary Objective: To describe the overall clinical outcomes (including both primary repair and diversion procedures) and epidemiological characteristics of traumatic colonic injuries in Thailand. Secondary Objective: To compare outcomes between damage control surgery (DCS) and non-DCS approaches.

Methods

Setting: this study was conducted at two tertiary care hospitals with designated trauma center capabilities:

Maharat Nakhon Ratchasima Hospital, Nakhon Ratchasima Province: This institution is a Level I Trauma Center, the highest designation for trauma care in Thailand. It serves as the major referral center for severe trauma cases from a large catchment area in the Northeastern region. Its capability includes 24-hour immediate coverage by general surgeons and multiple surgical subspecialties, along with in-house anesthesia and critical care services.

Pranangklao Hospital, Nonthaburi Province: This institution is a Level II Trauma Center located in the metropolitan area. It provides definitive care for a high volume of trauma patients, primarily from road traffic accidents in the surrounding urban and suburban areas. The inclusion of this center allows for the analysis of colonic injuries in a different demographic and mechanistic context compared to the regional center.

The selection of these two centers provides a representative sample of colonic injuries in Thailand, encompassing both high-volume urban trauma and severe referrals from a vast regional area. This combination enhances the robustness and national relevance of our epidemiological and clinical findings.

Study design: A retrospective study of hospitalized patients who sustained colonic injuries.

Study population: This retrospective study included 77 patients with colonic injuries (ICD-10th: S365, S3650, S3651) from Pranangklao Hospital (n=18) and Maharat Nakhon Ratchasima Hospital (n=59) between October 1, 2020, and September 30, 2023.

Inclusion criteria

1. Age 15 years or older
2. Underwent exploratory laparotomy

Exclusion criteria

1. Iatrogenic injuries
2. Rectal injuries

Data Collection: general patient information was recorded, including type of injuries, gender, age, and comorbidities. Additionally, the following data points were collected: time from injuries to surgery (hours), preoperative and intraoperative blood pressure, colonic injury scale (CIS) score (1990 revision)[1], fecal contamination, intraperitoneal blood volume, intra-operative blood transfusion, blood transfusion within 24 hours post injury (units), location of colonic injuries, number of associated injuries (organ injuries score >3), loss of abdominal wall, duodenum/ureter injuries, damage control surgery, operative time (hours), outcome, complications, and mortality.

Sample size: this study was designed as a retro-spective analysis. Therefore, the total number of patients (n=77) represents all consecutive cases of colonic injuries who met the inclusion criteria during

the study period (October 2020 – September 2023). No a priori sample size calculation was performed, as all eligible cases were included to minimize selection bias and to ensure that the results reflect the real-world epidemiology and treatment outcomes in our setting. Although the sample size was determined by case availability, it was adequate for descriptive analysis, yielding reasonably precise confidence intervals. We acknowledge that some subgroup analyses were limited by small numbers; however, the overall dataset provided meaningful insights into patterns of injury, management, complications, and outcomes.

Statistical analysis: Baseline characteristics were summarized using descriptive statistics. Comparisons between the DCS and non-DCS groups were performed using *t*-tests or Chi-square/Fisher's exact tests as appropriate. To assess the association between surgical method and mortality, generalized linear models with a log link and Poisson distribution with robust variance were applied, adjusting for preoperative shock and controlling for intraoperative shock. Results are presented as prevalence ratios (PR) with 95% confidence intervals (CI), and a two-sided $p<0.05$ was considered statistically significant.

Control for Confounding: To address potential confounding factors influencing mortality, a binary logistic regression model was planned to assess the independent association of surgical approach (primary repair vs. diversion) and damage control surgery with mortality, while controlling for key variables such as colonic injury grade (CIS ≥3), presence of preoperative shock, and number of associated organ injuries. However, due to the low number of events (deaths) in the diversion group (n=3), the model was unstable and could not be reliably performed. Therefore, results are presented as unadjusted comparisons with appropriate non-parametric tests where necessary.

Ethical considerations

Ethical approval for this research project has been granted by the Institutional Review Boards of Pranangklao Hospital and Maharat Nakhon Ratchasima Hospital.

Results

Patient Demographics, Injury Patterns, and Initial Management

During the three-year study period, 77 patients with traumatic colonic injuries were included in the analysis. The demographic and injury characteristics of the cohort are summarized in Table 1. The study population was predominantly male (77.9%) with a mean age of 40.0 ± 16.20 years. The leading mechanism of injury was blunt trauma (80.5%), with road traffic accidents being the most common cause (74.0%). The transverse colon was the most frequently injured segment (33.8%), and the majority of injuries were low-grade (Grade 1: 59.7%). However, 14.3% of patients sustained destructive Grade 5 injuries. Primary repair was the overwhelming surgical approach of choice, performed in 92.2% (71/77) of all patients. Notably, among the 11 patients with Grade 5 injuries, primary repair was successfully performed in 81.8% (9/11), with only one case of anastomotic leakage (success rate 90%). A comparison of patient profiles based on the mechanism of injury is shown in Table 2. Patients sustaining gunshot or shotgun injuries were significantly younger than those in the blunt trauma group (31.1 vs. 41.1 years, $p<0.001$). Furthermore, intra-abdominal injuries involving more

Table 1 Baseline characteristics and injury profiles of patients undergoing damage control surgery (DCS) vs. non-DCS (N=77)

Factors		Total, n=77 (%)		DCS, n=12 (%)		Non-DCS, n=65 (%)		p-value
		number	%	number	%	number	%	
Mean age, years (±SD)		40.0±16.20		35.8±14.24		40.8±16.52		0.323
Male		60	77.9	9	75.0	51	78.5	0.721
Underlying disease:	- Diabetes mellitus	4	5.2	NA		NA		NA
	- Hypertension	3	3.9					
	- Post stroke	1	1.3					
	- Seizure	1	1.3					
	- Depression	1	1.3					
	- Psychosis	1	1.3					
	- HIV	1	1.3					
Cause of injuries:								0.428
- Blunt injuries		62	80.5	10	83.3	52	80.0	
- Non-gunshot or shotgun injuries		8	10.4	2	16.7	6	9.2	
- Gunshot or shotgun injuries		7	9.1	0	0.0	7	10.8	
Side of colonic injuries:	Right	47	61.0	7	58.3	40	61.5	0.760
	Left	26	33.8	4	33.3	22	33.9	
	Both	4	5.2	1	8.3	3	4.6	
Colonic injuries grade	1	46	59.7	8	66.7	38	58.5	0.152
	2	4	5.2	2	16.7	2	3.1	
	3	8	10.4	0	0.0	8	12.3	
	4	8	10.4	0	0.0	8	12.3	
	5	11	14.3	2	16.7	9	13.9	
Colonic injury scale >3		27	35.1	2	16.7	25	38.5	0.197
Degree of fecal contamination:								1.000
- mild to moderate		75	97.4	12	100.0	63	96.9	
- severe or gross		2	2.6	0	0.0	2	3.1	
Colonic management:								1.000
-Primary repair		71	92.2	9	75.0	62	95.4	
-Diversion procedure		6	7.8	3	25.0	3	4.6	
Delayed time to surgery >6 hours		20	26.0	0	0.0	20	30.8	NA
Preoperative shock		19	24.7	9	75.0	10	15.4	<0.001*
Intraoperative shock		14	18.2	10	83.3	4	6.2	<0.001*
Intraperitoneal blood volume >1 L		23	29.9	7	58.3	16	24.6	0.035*
Loss of abdominal wall		0	0.0	0	0.0	0	0.0	NA
Duodenal or ureteral injuries grade >3		4	5.2	1	8.3	3	4.6	0.49
Operative time >4 hours		4	5.2	0	0.0	4	6.2	NA
Intraoperative blood transfusion >4 units		0	0.0	0	0.0	0	0.0	NA
Outcome: dead		16	20.8	10	83.3	6	9.2	<0.001*

Data are presented as mean (standard deviation) for age, and as number (%) for all other categorical variables

Abbreviations: SD: standard deviation; HIV: human immunodeficiency virus

Table 2 Comparison of patient characteristics by mechanism of injury (blunt vs. penetrating colonic injuries) (N=77)

Characteristics	Caused of injuries						p	
	Blunt (n=62)		Non-Gunshot or non shotgun (n=8)		Gunshot or shotgun (n=7)		p1	p2
	No.	%	No.	%	No.	%		
Age (year) (mean±SD)	41.1±16.59		38.8±11.15		31.1±16.97		0.12	<0.01*
Delayed time to surgery >6 hours	16	25.8	2	25.0	2	28.6	0.70	0.77
Preoperative shock	14	22.6	3	37.5	2	28.5	0.63	0.91
Intraoperative shock	10	16.1	3	37.5	1	14.3	0.32	0.68
Severe or gross fecal contamination	2	3.2	0	0.0	0	0.0	NA	NA
Intraperitoneal blood >1 L	16	25.8	3	37.5	4	57.1	0.78	0.21
Left side colonic injuries	24	38.7	1	12.5	5	71.4	0.29	0.21
CIS >3	20	32.3	2	25.0	5	71.4	0.46	0.10
Intraabdominal organ injuries > 2 systems	11	17.7	0	0.0	4	57.1	<0.01	0.03*
Loss of abdominal wall	0	0.0	0	0.0	0	0.0	NA	NA
Duodenal or ureteral injuries grade >3	3	4.8	0	0.0	1	14.3	NA	0.19
Damage control surgery	10	16.1	2	25	0	0.0	0.90	<0.01*
Operative time >4 hours	1	1.6	0	0	1	14.3	NA	0.19
Blood transfusion >4 unit in first 24 hours	15	24.2	3	37.5	3	42.9	0.70	0.54

p1 compare blunt injuries group with non-gunshot or non-shotgun injuries group

p2 compare blunt injuries group with gunshot or shotgun injuries group

* p<0.05

than two organ systems were significantly more common in the gunshot injuries group (57.1%) compared to the blunt injuries group (17.7%, p=0.03). Damage control surgery (DCS) was utilized exclusively in the blunt and non-gunshot penetrating injury groups, with a significantly higher application in the blunt group compared to the gunshot group (16.1% vs. 0.0%, p<0.001). Table 1 also delineates the characteristics of the 12 patients (15.6%) who underwent DCS compared to the 65 managed with a non-DCS approach. The DCS group presented with significantly higher physiological severity, as evidenced by a greater incidence of preoperative shock (75.0% vs. 15.4%, p<0.001), intraoperative shock (83.3% vs. 6.2%, p<0.001), and intraperitoneal blood loss exceeding 1 liter (58.3% vs. 24.6%, p=0.035).

Mortality and Complications by Surgical Management and Injury Mechanism

Postoperative outcomes stratified by the type of colonic surgery are presented in Table 3. The rate of colonic-related complications was lower in the primary repair group (5.6%) compared to the diversion procedure group (33.3%), though this difference did not reach statistical significance (p=0.07). Similarly, the overall mortality was 18.3% in the primary repair group versus 50% in the diversion group (p=0.10). It is important to note that there were no

Table 3 Comparison of postoperative outcomes between primary repair and diversion procedure groups (N=77)

	Group				p
	Primary repair (n=71)		Diversion procedure (n=6)		
	No.	%	No.	%	
Colonic-related complications	4	5.6	2	33.3	0.07
Dead	13	18.3	3	50.0	0.10
Colonic-related mortality	0	0.0	0	0.0	NA

colonic-related mortalities in either group. The causes of death were predominantly related to profound shock or severe associated injuries (e.g., head trauma), rather than complications of the colonic repair itself. When outcomes were analyzed by injury mechanism (Table 4), no statistically significant differences in colonic-related complications or overall mortality were found between the groups. The overall mortality rates were 21.1% for blunt trauma, 25% for non-gunshot penetrating trauma, and 14.3% for gunshot injuries. There were no colonic-related mortalities in any group.

The Critical Impact of Damage Control Surgery (DCS)

The unadjusted overall mortality was significantly higher in the DCS group (83.3%) than in the non-DCS group (9.2%), with an odds ratio of 49.17 (95%CI: 8.67-278.73; p<0.001), as detailed in Table 5. A further breakdown of mortality by the type of colonic surgery, also presented in Table 5, reveals consistently high mortality rates in the DCS subgroup, with 88.9% (8/9) for primary repair and 66.7% (2/3) for diversion procedures. In contrast, mortality in the non-DCS group was substantially lower, at 8.1% (5/62) for primary repair and 33.3% (1/3) for diversion. However, after adjusting for the confounding effects of preoperative shock, intraoperative shock, and intraperitoneal blood volume — key indicators of injury severity that inform the decision to perform DCS — the association between DCS and mortality was no longer statistically

Table 4 Complication and mortality rates by mechanism of injury (N=77)

Characteristics	Caused of injuries						p	
	Blunt (n=62)		Non-gunshot or non shotgun (n=8)		Gunshot or shotgun (n=7)		p1	p2
	No.	%	No.	%	No.	%		
Colonic-related complications	6	9.7	1	12.5	0	0.0	0.59	NA
Dead	13	21.1	2	25.0	1	14.3	0.68	0.94
Colonic-related mortality	0	0.0	0	0.0	0	0.0	NA	NA

p1 compare blunt injuries group with non gunshot or non-shotgun injuries group

p2 compare blunt injuries group with gunshot or shotgun injuries group

Table 5 Mortality outcomes in damage control surgery vs. non-DCS groups (N=77)

	Damage control surgery (n=12)	Non-damage control surgery (n=65)	p	Odds ratio	95%CI
Primary repair (n=71)	8/9 (88.9%)	5/62 (8.1%)	<0.001*	91.20	9.41-888.66
Diversion procedure (n=6)	2/3 (66.7%)	1/3 (33.3%)	0.500	4.00	0.13-119.24
Overall mortality (n=77)	10/12 (83.3%)	6/65 (9.2%)	<0.001*	49.17	8.67-278.73

*p<0.05

significant (prevalence ratio = 4.76; 95%CI: 0.87-26.10; p=0.072). This indicates that the elevated mortality observed in the DCS group was attributable to the patients' more critical initial presentation and greater severity of associated injuries, rather than to the damage control technique itself.

Discussion

This study found that colonic injuries primarily occurred in the working-age population, with a mean age of 40±16.20 years. The mean age of patients with gunshot or shotgun injuries was significantly lower compared to those with blunt injuries (p<0.05). Males were more frequently affected than females (77.9% vs. 22.1%), consistent with the findings of Brady and Oosthuizen.[17,18] Patients with multiple comorbidities have been shown to have poorer outcomes, as demonstrated in a study by Chamieh et al.[19] Blunt trauma accounted for 80.5% of injuries, with road traffic accidents being the most common cause at 74.0%. These results differ from previous studies[17,18], which have shown a higher proportion of penetrating injuries. The most common site of colonic injuries was the transverse colon (33.8%). Collectively, 66.2% of injuries involved the right side of the colon, consistent with previous studies.[19] Previous study has shown that hypotension, massive transfusion, the severity of intra-abdominal contamination, associated organ injuries, shock, left-sided colon injuries, and multiple comorbidities can significantly increase morbidity and mortality rates.[20] In this study, preoperative shock was observed in 22.6% of blunt injuries cases, 37.5% of non-gunshot or non-shotgun injuries cases, and 28.5% of gunshot or shotgun injuries cases. Intraoperative shock occurred in 16.1% of blunt injuries cases, 37.5% of non-gunshot or non-shotgun injuries cases, and 14.3% of gunshot or shotgun injuries cases. Intraperitoneal blood loss greater than 1 liter was found in 25.8% of blunt injuries cases, 37.5% of non-gunshot or non-shotgun injuries cases, and 57.1% of gunshot or shotgun injuries cases. Blood transfusion exceeding 4 units within the first 24 hours was observed in 24.2% of blunt injuries cases, 37.5% of non-gunshot or non-shotgun injuries cases, and 42.9% of gunshot or shotgun injuries cases. Gross or severe fecal contamination was noted in 3.2% of blunt injuries cases. Intra-abdominal organ injuries involving more than 2 systems were found in 17.7% of blunt injuries cases, significantly more than in the non-gunshot or non-shotgun injuries group (0%, p<0.05), but significantly less than in the gunshot or shotgun injuries group (57.1%, p<0.05). Damage control surgery was performed in 16.1% of blunt injuries cases, 25% of non-gunshot or non-shotgun injuries cases, and none of the gunshot or shotgun injuries cases, with a significant difference between the blunt

injuries and gunshot or shotgun injuries groups ($p<0.05$). Our study found that 4.8% of blunt trauma patients and 14.3% of gunshot or shotgun injuries patients sustained duodenal or ureteral injuries graded greater than 3. These findings align with previous research that has advocated for diversion procedures in the management of these injuries.[4-6,12-14,17,19,20-34] This study found a significantly higher overall mortality rate of 83.3% among patients undergoing damage control surgery (DCS) compared to the 45.8% reported in previous studies.[35] Damage Control Surgery (DCS) is a life-saving procedure intended for the most critically injured patients. The analysis comparing outcomes between the DCS and non-DCS groups supports this rationale. After adjusting for preoperative shock, intraoperative shock, and intraperitoneal blood volume, no statistically significant difference in mortality was observed (prevalence ratio = 4.76; 95%CI: 0.87-26.10; p=0.072). This indicates that the higher mortality rate in the DCS group is not attributable to the procedure itself but rather a consequence of the patients' more severe underlying injuries.

Our study found a significant difference in colonic-related complication rates between the primary repair (5.6%) and diversion procedure (33.3%) groups. While these results support the findings of previous studies[4,5,12,15,17,32] favoring primary repair, further investigation is warranted to confirm these findings and explore potential factors influencing outcomes. Our findings suggest that primary repair is associated with favorable outcomes in our population. The lower colonic-related complication rate (5.6% vs 33.3%) is consistent with the global literature.[4,5,12,15,17,32] The fact that over 80% of grade 5 injuries were successfully (90%) managed with primary repair challenges traditional dogma and supports a more aggressive approach toward primary reconstruction, even in severe injuries, within experienced trauma centers[36].

Limitation

- Retrospective design.
- Small sample size in key subgroups (especially diversion, n=6). Acknowledge that the P for key comparisons (0.07, 0.10) did not reach significance likely due to this type II error.
- Inability to perform a robust multivariate analysis due to the low event rate.
- Potential for selection bias (surgeons chose the operation based on unmeasured patient factors).
- Short-term outcomes only.

Conclusion

Primary repair is the predominant and successful strategy for colonic trauma in two major Thai trauma centers, with acceptable outcomes even in high-grade injuries. The higher mortality rate in the DCS group was not due to the surgical technique itself, but rather because the patients in this group had much more severe wounds to begin with, thus confirming that DCS is a necessary and effective surgery for this critically ill patient.

Conflict of interest

No authors have any potential conflict of interest to disclosure.

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การรักษาการบาดเจ็บลำไส้ใหญ่: ผลลัพธ์ของการผ่าตัดในประชากรไทย

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บทคัดย่อ: การบาดเจ็บของลำไส้ใหญ่มีการรักษาที่พัฒนาอย่างต่อเนื่อง จากเดิมเน้นการรักษาแบบประคับประคองมาเป็นการผ่าตัด โดยเทคนิคและผลลัพธ์การรักษามีพัฒนาการที่ดีขึ้น อย่างไรก็ดี ความรุนแรงของการบาดเจ็บยังเป็นความท้าทายสำคัญ โดยเฉพาะเมื่อมีการบาดเจ็บของอวัยวะอื่นร่วมด้วยซึ่งเพิ่มอัตราภาวะแทรกซ้อนและอัตราการเสียชีวิต การเลือกวิธีการรักษาระหว่างการผ่าตัด primary repair และการผ่าตัด diversion procedure ขึ้นอยู่กับความรุนแรงของการบาดเจ็บและปัจจัยเฉพาะตัวผู้ป่วย การศึกษานี้มีวัตถุประสงค์หลักเพื่ออธิบายผลลัพธ์ทางคลินิก (primary repair และ diversion procedures) และลักษณะทางระบาดวิทยาของการบาดเจ็บลำไส้ใหญ่ในประเทศไทย วัตถุประสงค์รองเพื่อเปรียบเทียบผลลัพธ์ระหว่างการผ่าตัด damage control surgery (DCS) และ non-DCS การศึกษาย้อนหลังนี้วิเคราะห์ผู้ป่วย 77 ราย ที่ได้รับการวินิจฉัยว่ามีการบาดเจ็บของลำไส้ใหญ่ (รหัส ICD10th: S365, S3650, S3651) ซึ่งรับเข้าโรงพยาบาลพระนั่งเกล้าและโรงพยาบาลมหาราชนครราชสีมาระหว่างวันที่ 1 ตุลาคม 2563 ถึง 30 กันยายน 2566 ผลการศึกษาพบว่าผู้ป่วยส่วนใหญ่เป็นชาย (77.9%) อยู่ในวัยทำงาน และกลุ่มผู้ที่ได้รับบาดเจ็บจากอาวุธปืนมีอายุน้อยกว่า สาเหตุหลักมาจากอุบัติเหตุจราจร (74.0%) นำไปสู่การบาดเจ็บแบบไม่ทะลุ (80.5%) บ่อยกว่าการบาดเจ็บแบบ penetrating injury (19.5%) ตำแหน่งที่บาดเจ็บบ่อยที่สุดคือลำไส้ใหญ่ส่วน transverse colon (33.8%) ระดับความรุนแรงของการบาดเจ็บกระจายดังนี้ ระดับ 1 (59.7%), ระดับ 2 (5.2%), ระดับ 3 (10.4%), ระดับ 4 (10.4%) และระดับ 5 (14.3%) อัตราการเสียชีวิตโดยรวมอยู่ที่ 20.8% (16/77; 95% CI: 12.4-31.5) ภาวะแทรกซ้อนที่เกี่ยวข้องกับลำไส้ใหญ่เกิดขึ้น 7.8% (6/77; 95% CI: 3.6-15.8) การผ่าตัดเย็บซ่อมทันที (primary repair) เป็นวิธีการผ่าตัดที่นิยมใช้มากที่สุด (92.2%, 71/77; 95% CI: 83.4-96.6) ในขณะที่การทำผ่าตัด diversion procedure ทำเพียง 7.8% (6/77; 95% CI: 3.4-16.6) ในผู้ป่วยที่บาดเจ็บระดับ 5 พบว่า 81.8% (9/11) ได้รับการผ่าตัด primary repair การศึกษานี้สนับสนุนการซ่อมแซมลำไส้แบบหลักเป็นแนวทางแรกในการรักษาการบาดเจ็บของลำไส้ใหญ่ แม้ในกรณีที่บาดเจ็บรุนแรงแบบ destructive colonic injuries (colonic injury grade 5)

คำสำคัญ: **การบาดเจ็บของลำไส้ใหญ่; ผลลัพธ์จากการผ่าตัด; การผ่าตัดเย็บซ่อมลำไส้ใหญ่**