

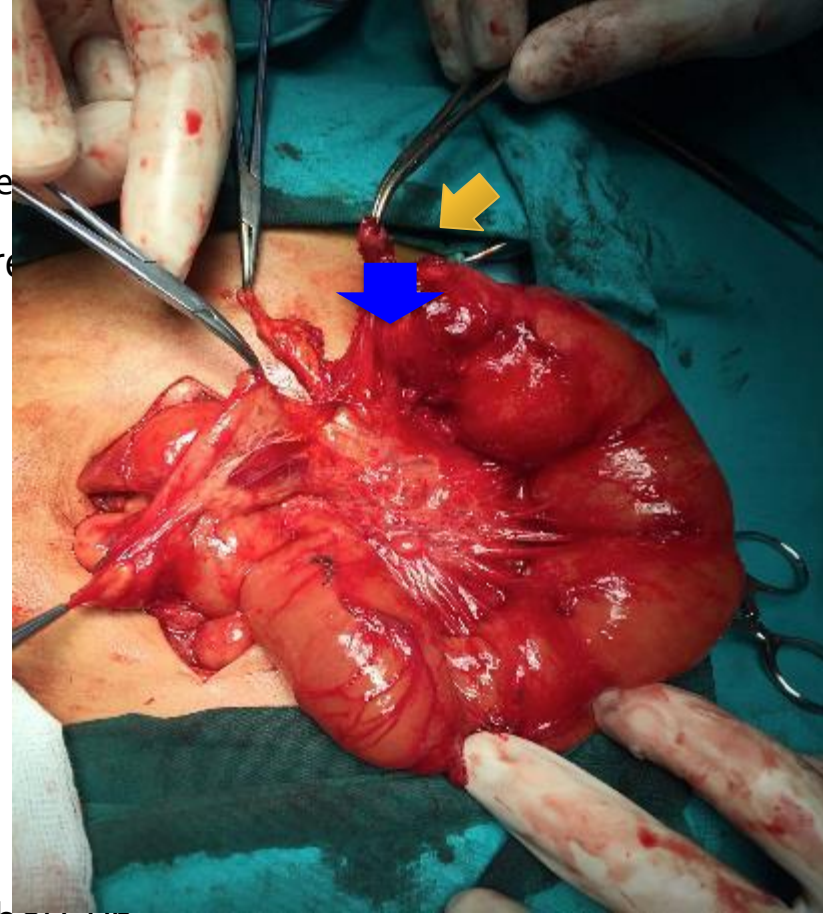
Barsak nakli dıřında cerrahi seenekler

Dr Ahmet elik

EÜTF ocuk Cerrahisi AD

KBS tanımlama

- Anatomik-Barsak boyutu
 - Hayvan modellerinde
 - Barsak uzunluğu: >%80 rezeksiyon >90 rezeksiyon
 - Kalan barsak miktarı?nasıl ölçüldüğü-nerede
 - <40 cm--<50 cm--<70 cm--<100 cm
 - Rezeke edilen segment?
 - Ileum—Jejunum--+kolon
 - İÇV durumu?
- Fonksiyonel
 - TPN süresi
 - 3ay/6 ay/42 gün vb
- Gestasyonel yaş, KBS olduğu aktuel yaş, kg, boy, vb
- Etyolojik faktörler



KBS tedavi amacı!

Kalan barsak fonksiyonunu arttırmak
Barsak emilim kapasitesini arttırmak:



ADAPTASYON



Yeterli emilim

Enteral tolerans
TPN bağımsız

- Yeterli büyüme
 - gelişme

Fiziksel bulgular

emilim yüzeyinde artış

villus hipertrofisi,

villus ve kript hücre çoğalması

spesifik emilim kapasitesi artış

- Dilatasyon
- Duvar kalınlaşması



Yetersiz emilim

Diyare
Mukozal inflamasyon

- Dehidratasyon
- Elektrolit inbalansı
- Perianal/stomal sorun

ADAPTASYON:

düzenlenmesi

Hormonal faktörler

Büyüme fakt.: IGF, PA
Büyüme hormonu
Sekretin, CCK,
Peptid Y
Enteroglukagon
GLP-2

Diyetetik faktörler

Trofik besleme
Protein
Glutamin
Uzun zincir YA
Prebiyotik
Probiyotik

KBS

ADAPTASYON

AŞIRI ADAPTASYON

- Staz
- Bakteriyel çoğalma
- Sepsis

Medikal tedaviler

- Adaptasyon amaçlı

- Önleyici

Cerrahi tedaviler

- Adaptasyon amaçlı

- Önleyici

Komplikasyonlar

- KC yetmezliği
- Damar yolu sorunları

Cerrahinin amacı?

- Adaptasyona yardımcı olmak
- Intestinal otonomi kazanmak
- Çocukta yeterli büyüme ve gelişmeyi sağlamak
- Erişkinde normal kilo ve sağlığı sürdürmek

Hangi hastaya?

- TPN bağımlı
- Enteral beslemeyi tolere edemeyen
- Büyüme gelişmenin sağlanamadığı

Ne zaman?

- KC bozulmadan
- Damar yolu tükenmeden
- Yaşamsal komplikasyonlar gelişmeden

Ne zaman?

5 hafta?????

Adaptasyon 6-18-24
ay

Ne zaman?

BAŞARI=uygun zaman+uygun hasta+uygun tedavi

- Bütünlük sağlama girişimleri ilk 6-8 ay
- Emilimi/motiliteyi/yüzeyi artırma girişimleri ilk 2 yıl
- Sonrasında kurtarma girişimleri:Tx

Ortak karar YOK

CERRAHİ

ERKEN YAPILMALI

ADAPTASYON

ŞARTLAR

1. Daha önce kısmi veya tam adaptasyon sağlamış KBS li hastada malabsorpsiyon veya TPN komplikasyonu gelişmesi
2. Tıkanıklığa bağlı dilatasyonu olan erişkin veya büyük çocuk veya atreziyle doğmuş bebeklerde tapering yerine ilk girişim olarak uzatma
3. Aylar boyunca ilerleme kaydedilemeyen BY hastaları (öz: kalorinin >%50 sini TPN ile alma zorunluluğu)

KBS şiddetini belirleyen faktörler

	iyi	kötü
Rezeksiyon miktarı	<80	>80
Rezeksiyon yeri	jejunum	ileum
Ek GIS hastalığı	yok	var
Zaman	>1 yaş	<1 yaş
GIS anatomisi	iÇV var, kolon salim	iÇV yok, kolon ve/veya mide rezeke

Kalan barsak-iÇV-mortalite

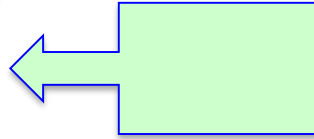
	Yaşam beklentisi
> 40 cm \pm İÇV	%86
15-40 cm + İÇV	%100
15-40 cm - İÇV	%60
< 20 cm - İÇV	%50
Toplam	%81

Mortalite Riski ?

Bil >2.5 mgr/dl:

<2.5 survi %94

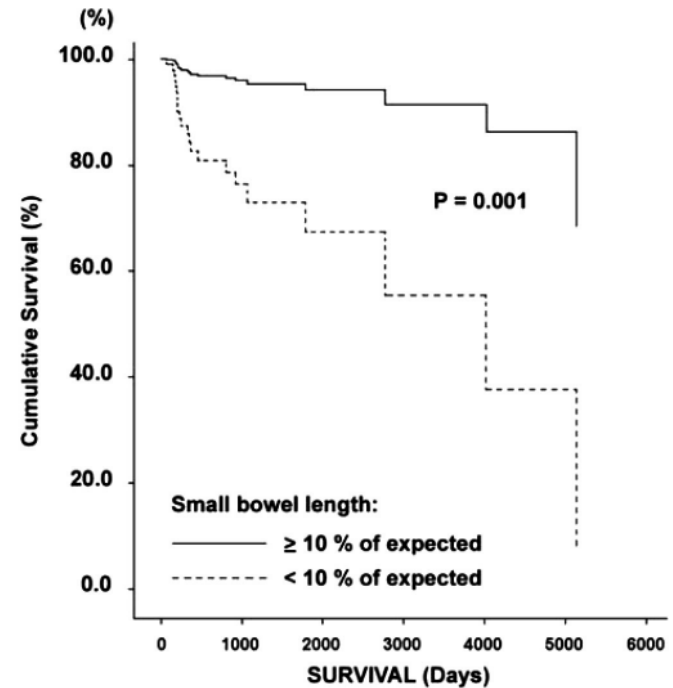
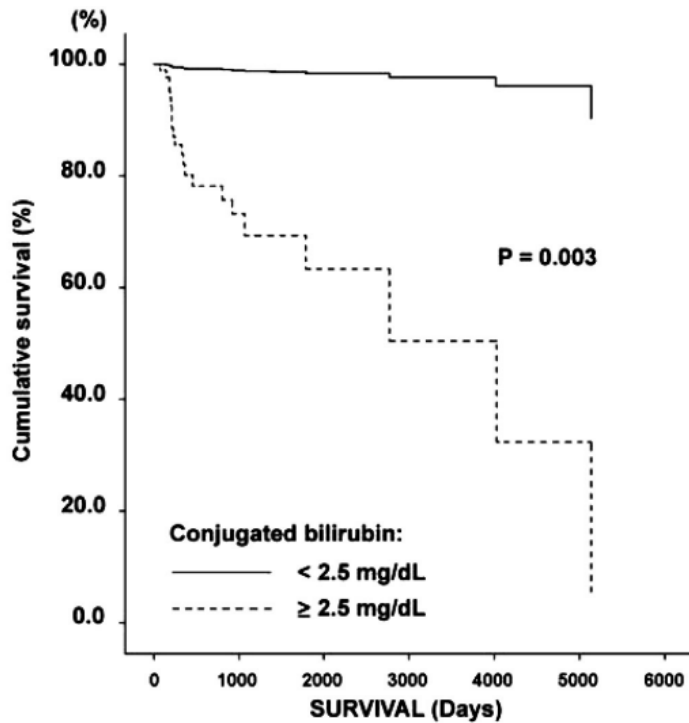
>2.5 survi %51



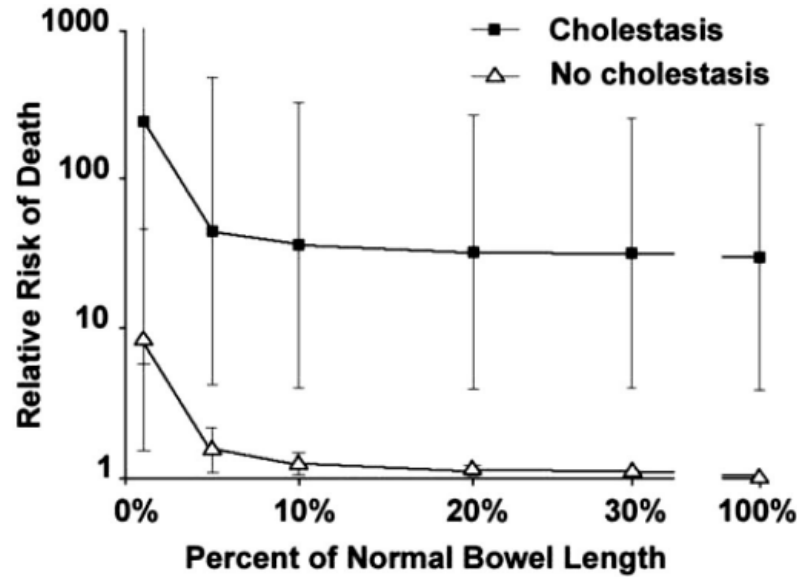
Beklenen barsak <10%:

>10 survi %88

<10 survi %21



*Gestasyona göre beklenen barsak uzunluğu=
doğum haftası-10= ör: 35hf-10= 250 cm
%10=25 cm



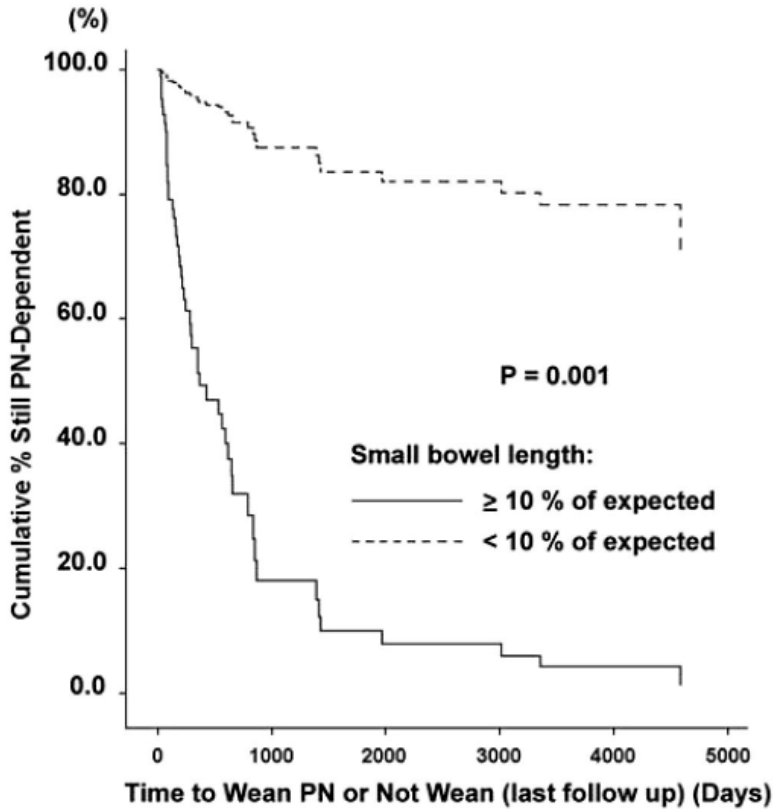
*Ariel U. Spencer, MD, *Andreea Neaga, BS, *Brady West, MA, § Jared Safran, BA, * Pamela Brown, MD, † Imad Btaiche, PharmD, ‡ Barbara Kuzma-O'Reilly, RD, MA, ¶ and Daniel H. Teitelbaum, MD *Pediatric Short Bowel Syndrome Redefining Predictors of Success *Ann Surg* 2005;242: 403-412)

TPN den ayrılma!

Beklenen barsak: <10

<10 ayrılma: 10.5

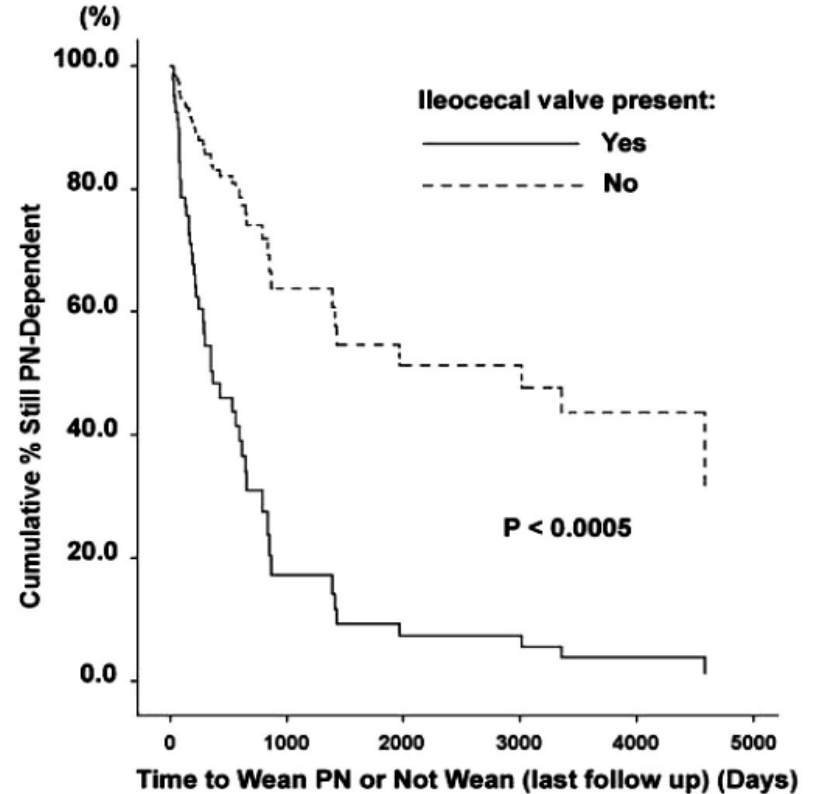
>10 ayrılma: 83.1



içv: -----

+içv ayrılma: 80

--içv ayrılma: 50



Cerrahi seçiminde temel belirleyiciler?

1. Kalan barsak uzunluğu
2. Dilatasyonun derecesi

Cerrahi seçenekler?

Tablo. KBS hastalarında cerrahi seçenekler

Yavaş geçişi düzeltmek	Dilatasyon – Hızlı pasaj+	Dilatasyon+ motilite bozuk	Mukozal alanı arttırmak
Adezyon, Striktür Kör loop, Fistül	Segmental transpozisyon	Tapering (uzunluk iyi)	Aşamalı uzatma
Oluşturulmuş obst (valv, interpoz obst.)	Kolonik transpozisyon	Plikasyon (uzunluk iyi)	Kontrollü doku ekspansiyonu
	Valvler	LILT-Bianchi	
		STEP	
	Diğer	Diğer	

Preop deęerlendirme!

Önceki op bilgileri

Kalan barsak uzunluęu
İÇV durumu
Kolon/mide/duodenum
Stoma

KBS etyolojisi

Mukozal kitlenin durumu (Citrullin vb)

Biyokimyasal parametreler

KCFT
BFT
Kanama diyatez

Medikasyonlar

Beslenme
Tedavi edici ajanlar(AB, vb)

Radyolojik tetkikler

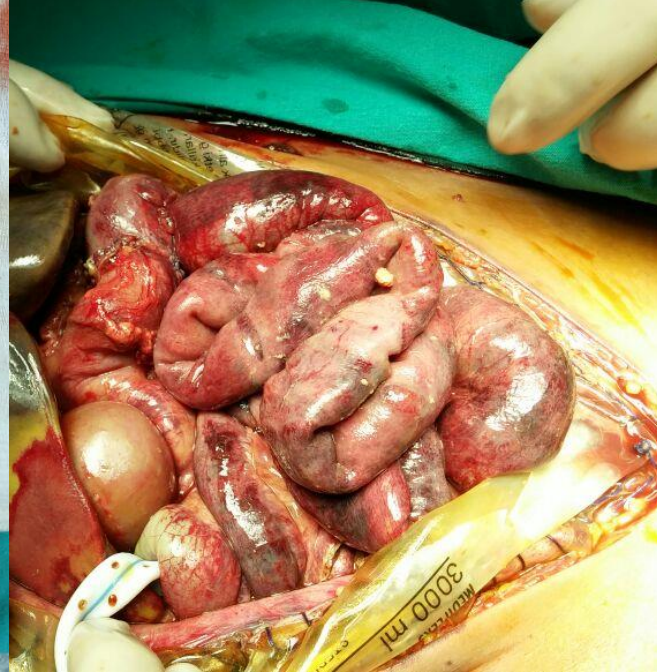
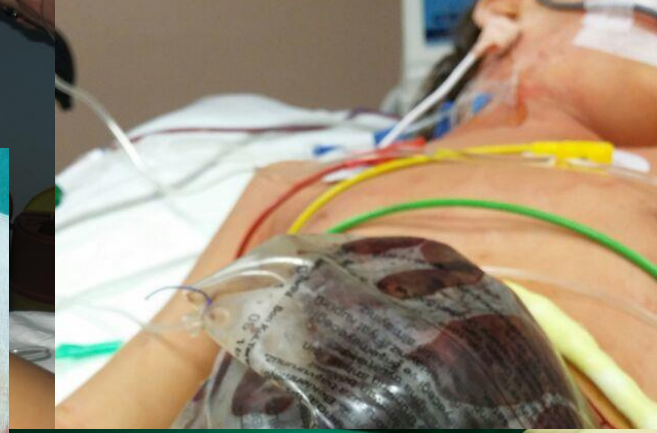
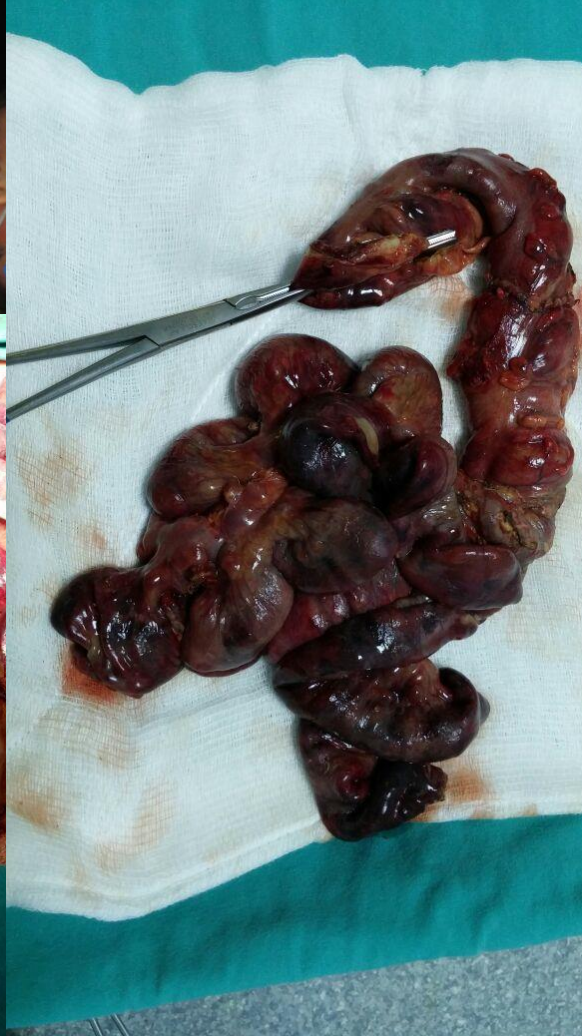
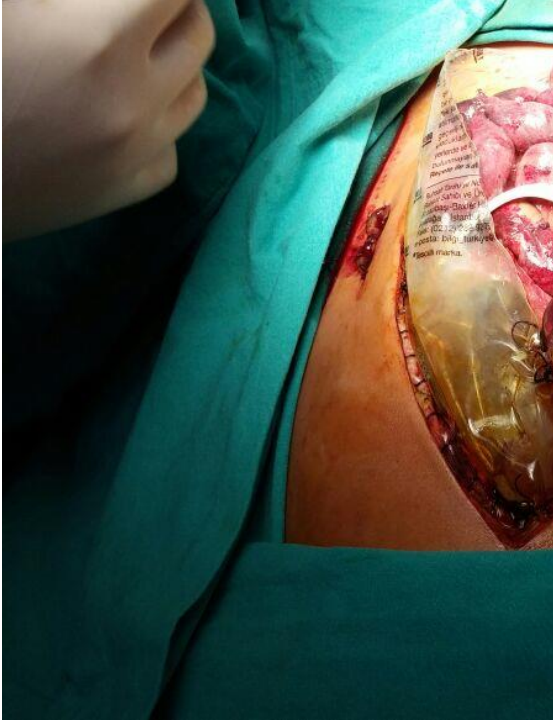
Üst GİS takip grafileri
Alt GİS deęerlendirme
Vasküler yol Doppler incelemeler
Portal sistem deęerlendirilmesi

Cerrahi seçenekler

Barsak korunması ve bütünlüğünün sağlanması:

- İlk cerrahi!!!
- Silo
- Stoma
- NEK!

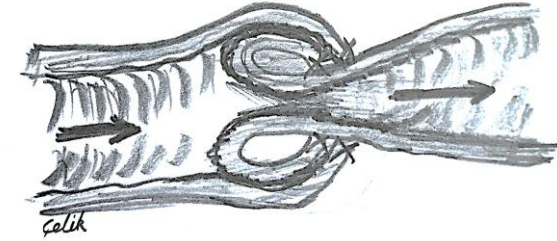
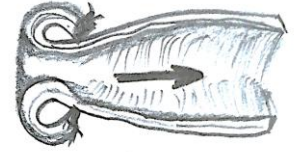
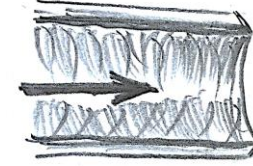
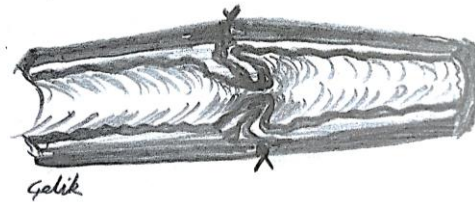
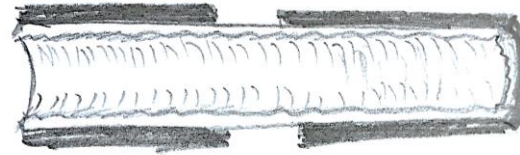
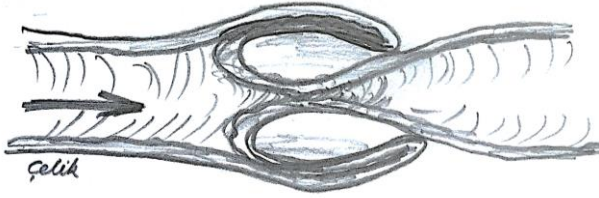
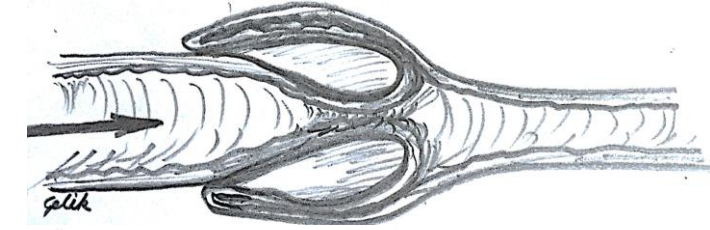
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Cerrahi seenekler

Otolog barsak rekonstrüksiyon cerrahisi

- *Transit Zamanını Uzatici İşlemler*
- sfinkter veya valv oluşturulması



Cerrahi seçenekler

Otolog barsak rekonstrüksiyon cerrahisi

- *Transit Zamanını Uzatici İşlemler*
- anti peristaltik barsak segmenti interpozisyonu



- **Çocuklarda pek tercih edilmemektedir**
- **Erişkin KBS olgularında yeniden gündeme getirilmiştir**
 - **2012* ve 2013** te iki geniş seri başarılı sonuçlar bildirmiştir**

*Beyer-Berjot L, Joly F, Maggiori L, et al. Segmental reversal of the small bowel & can end permanent parenteral nutrition dependency: an experience of 38 adults with short bowel syndrome. Ann Surg 2012; 256:739–745. This study is the only recent one that analyses a large group of patients.

**Layec S, Beyer L, Corcos O, et al. Increased intestinal absorption by & segmental reversal of the small bowel in adult patients with short bowel syndrome: a case control study. Am J Clin Nutr 2013; 97:100–108. This study is clear and functional regarding the effect of reverse segment.

Cerrahi seenekler

Otolog barsak rekonstrüksiyon cerrahisi

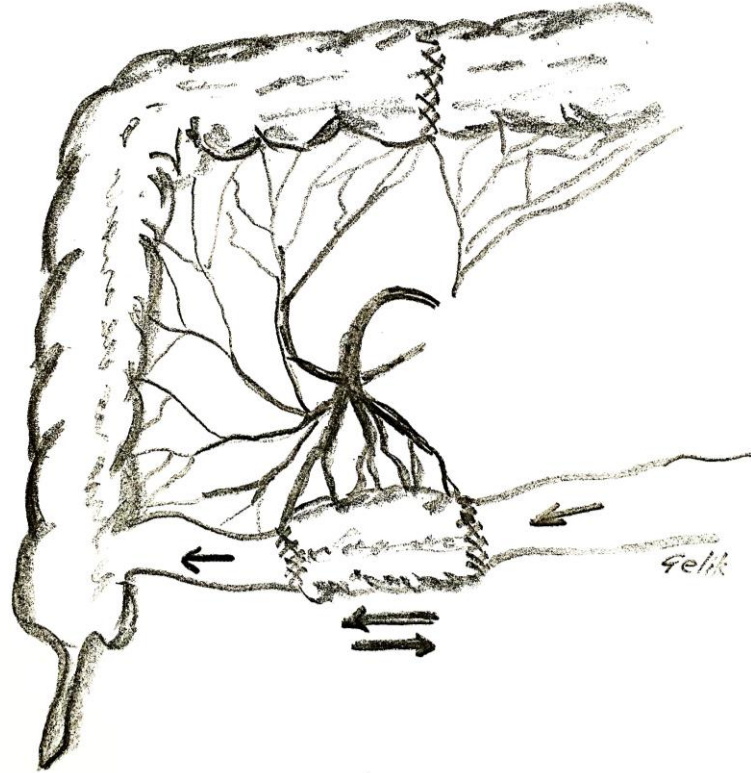
- *Transit Zamanını Uzatici/teması arttırıcı İşlemler*
- Tekrar dolařtırıcı loop



Cerrahi seenekler

Otolog barsak rekonstrüksiyon cerrahisi

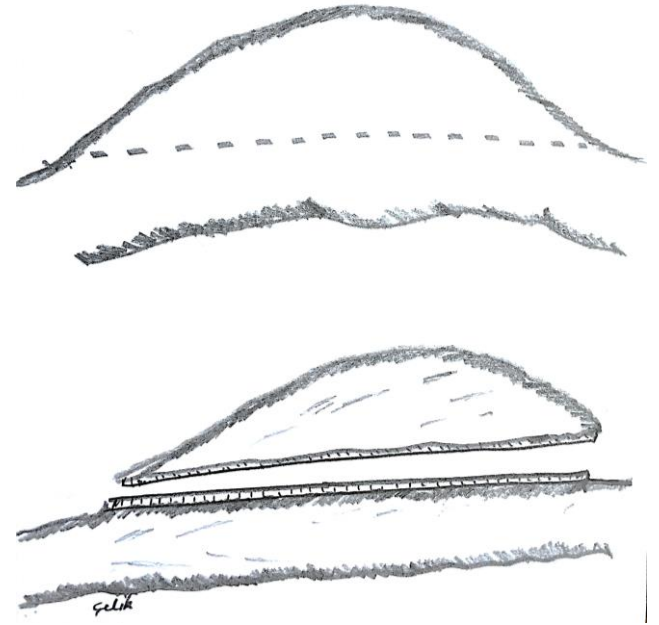
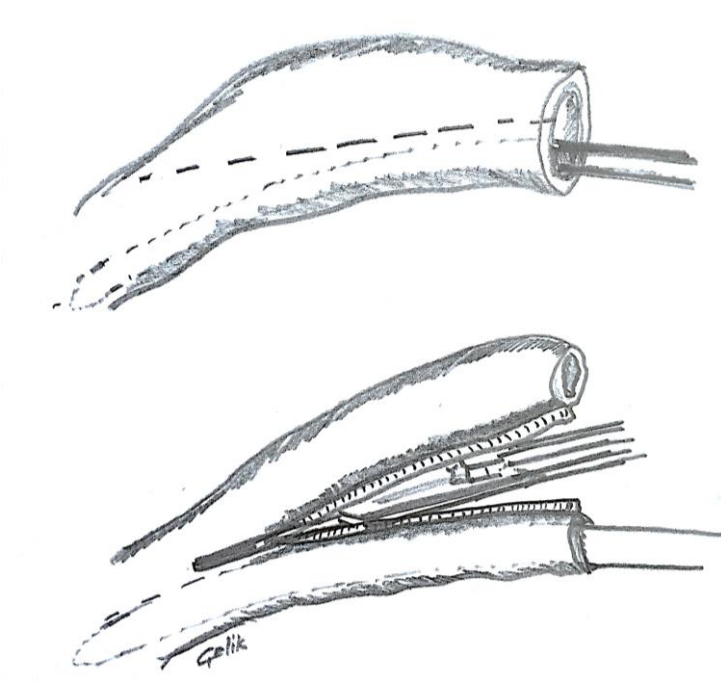
- *Transit Zamanını Uzatici İşlemler*
- kolon interpozisyonu(izo./anizop)



Cerrahi seenekler

Otolog barsak rekonstrüksiyon cerrahisi

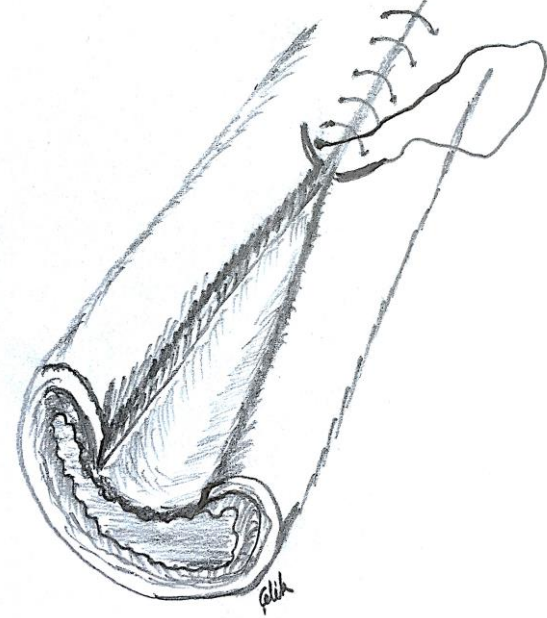
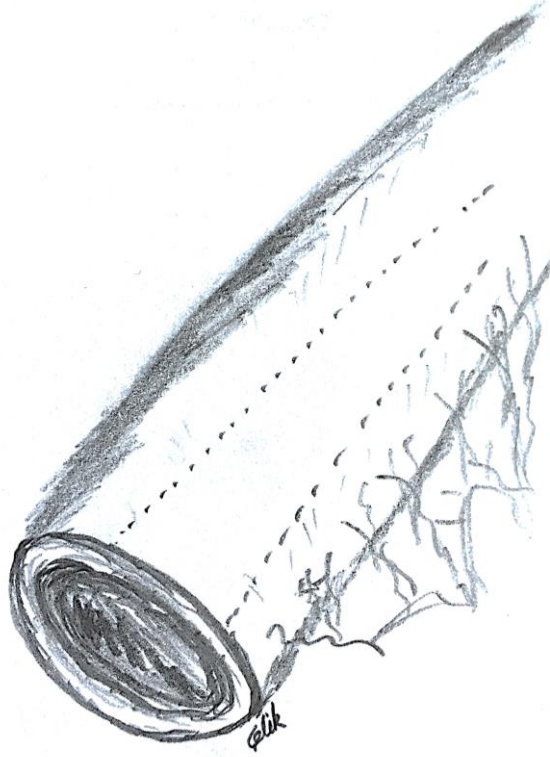
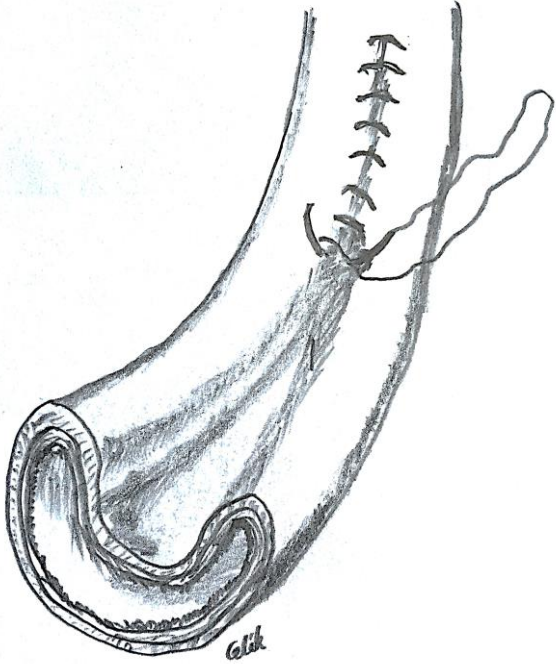
- *Motiliteyi arttırmayı hedefleyen işlemler*
- intestinal tapering



Cerrahi seenekler

Otolog barsak rekonstrüksiyon cerrahisi

- *Motiliteyi arttırmayı hedefleyen işlemler*
- intestinal plikasyon



Cerrahi seçenekler

Otolog barsak rekonstrüksiyon cerrahisi

- Motiliteyi düzeltmeyi hedefleyen
- **LILT= Bianchi op.**

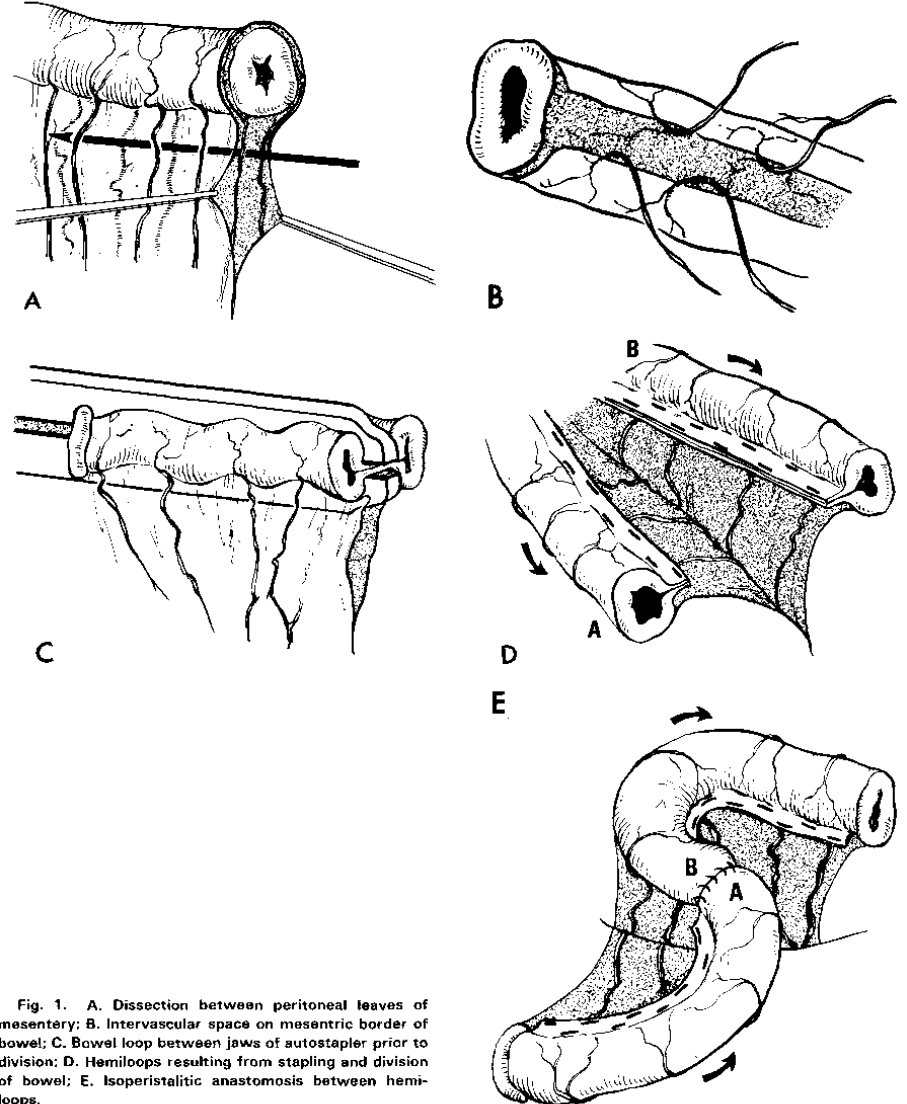


Fig. 1. A. Dissection between peritoneal leaves of mesentery; B. Intervascular space on mesenteric border of bowel; C. Bowel loop between jaws of autostapler prior to division; D. Hemiloops resulting from stapling and division of bowel; E. Isoperistaltic anastomosis between hemiloops.

Bianchi modifikasyonu

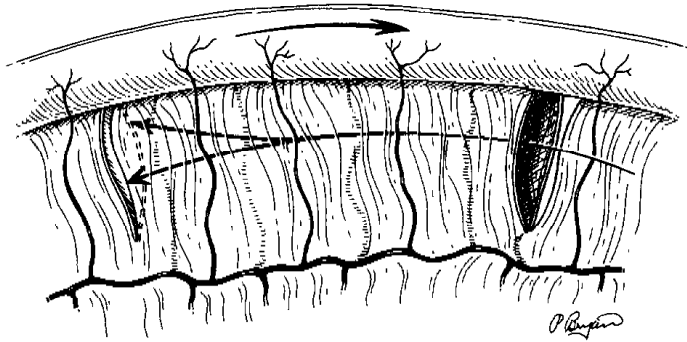


Fig 1. The mesentery is separated based on the bifurcated vessels.

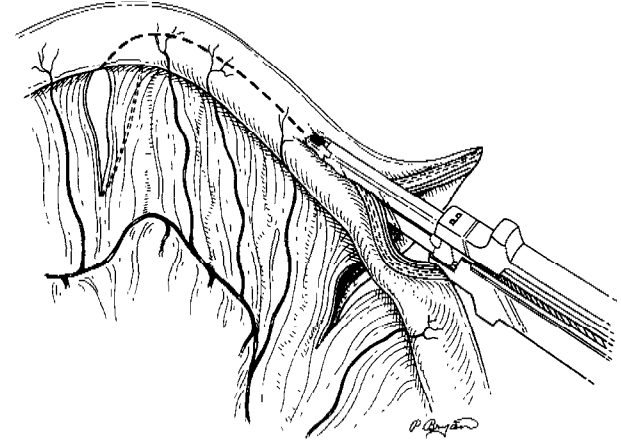


Fig 2. With sequential firings of a stapling device, the division of the intestine begins obliquely, proceeds longitudinally, then ends obliquely at the other end of the intestine.

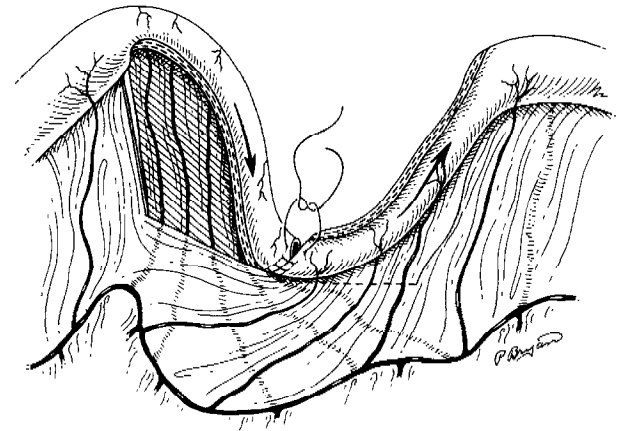
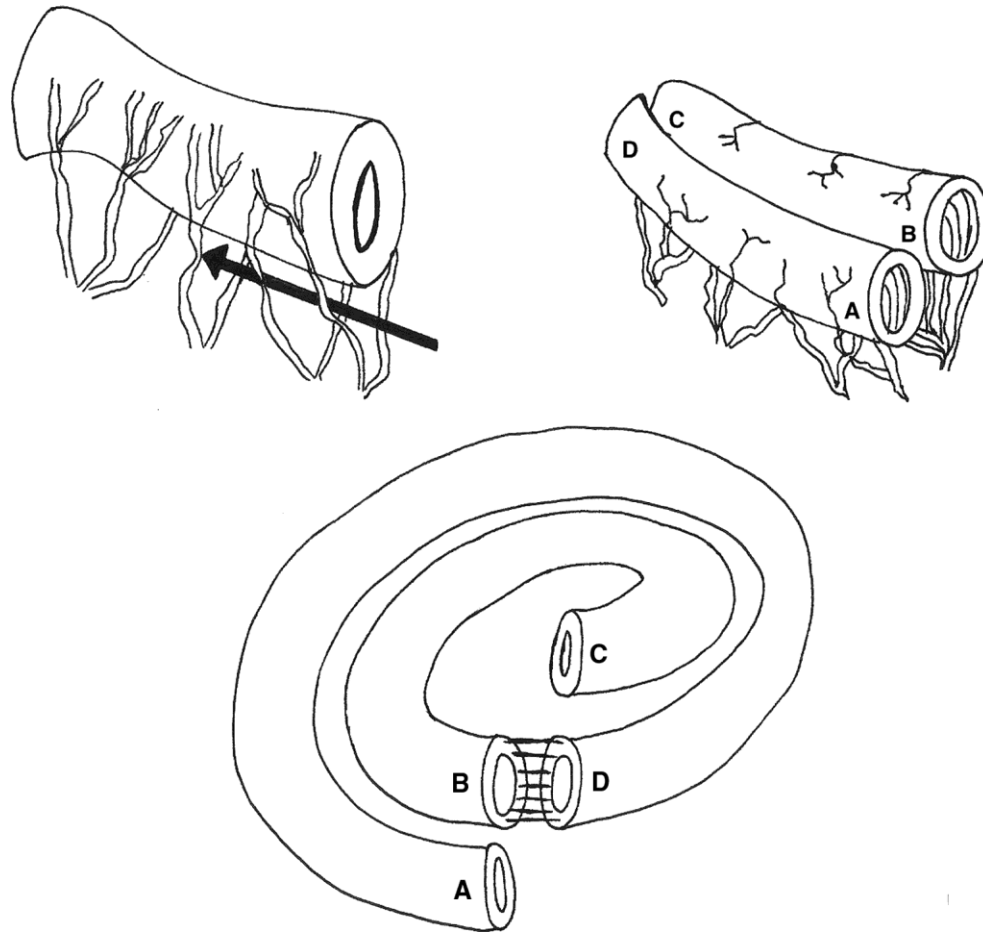


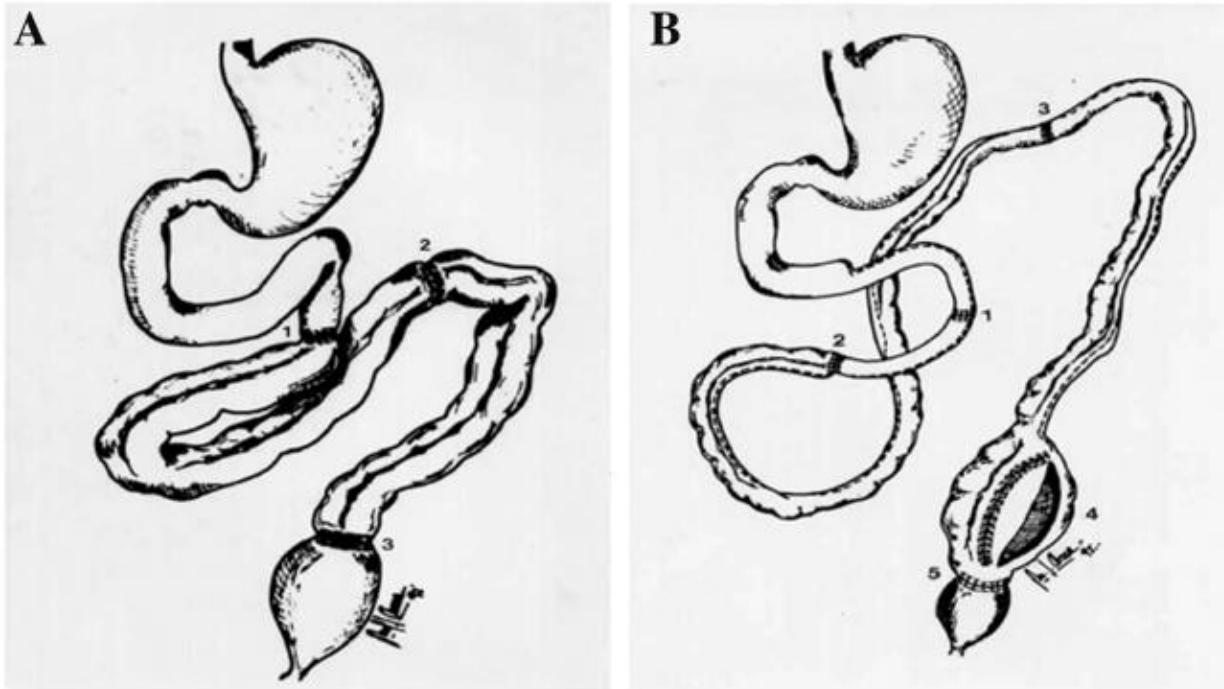
Fig 3. The two ends are sewn into a wide, tapered anastomosis, reestablishing intestinal continuity with a single anastomosis instead of three.

Bianchi modifikasyonu



3 Longitudinal Intestinal Lengthening and Tailoring (LILT). Above left: A longitudinal mesenteric tunnel (arrow) is created separating

Kolona uygulanabilir mi?



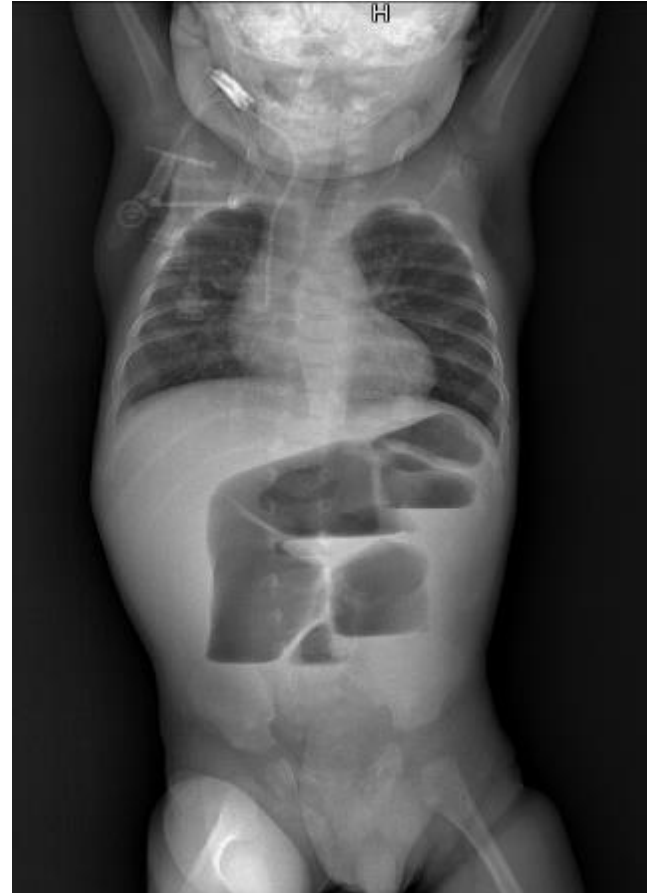
119. Devesa JM, Vincente E, Nuno, J, et al. Síndrome de intestino ultracorto: tratamiento quirúrgico de un caso excepcional. *Rev Esp Enferm Dig* 1992; 84:259-262.

120. Devesa JM, Botella-Carretero JI, Hervasa PL, Reya A, Diea J, Caleroa A. Ultrashort bowel syndrome: surgical management and long-term results of an exceptional case. *J Pediatr Surg*. 2008;43:E5-E9.

D.S.Y.

- 5 aylık erkek
- G₁P₁ anneden 37 GH 3200 gr doğum
- Postnatal dönemde
 - Solunum sıkıntısı → Başka bir merkez YDYB sevk
 - Batın distansiyonu → ADBG' de HSS
 - 19 günlükken laparotomi → nekrotik ince barsaklar
 - 22 günlükken second look laparotomi → kolon ve ince barsaklar nekrotik, rezeksiyon uygulanmamış
 - O/G drenaj ve TPN ile konservatif izlem

ADBG



EÜTF Çocuk Cerrahisi

Kolon grafisi



Kullanılmamış kolon
Opak madde terminal ileuma
geçmemiştir

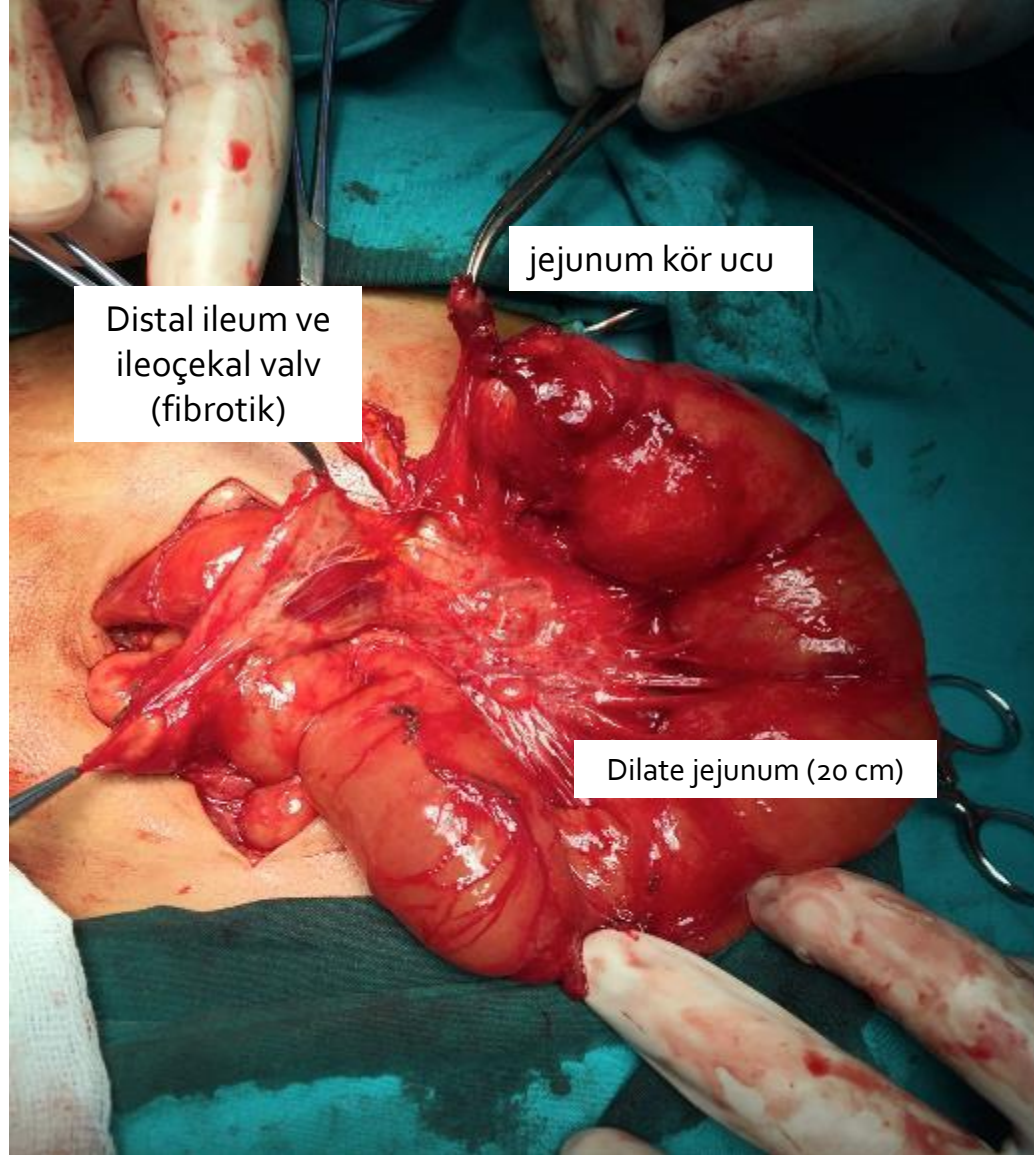
Mide-İB takip

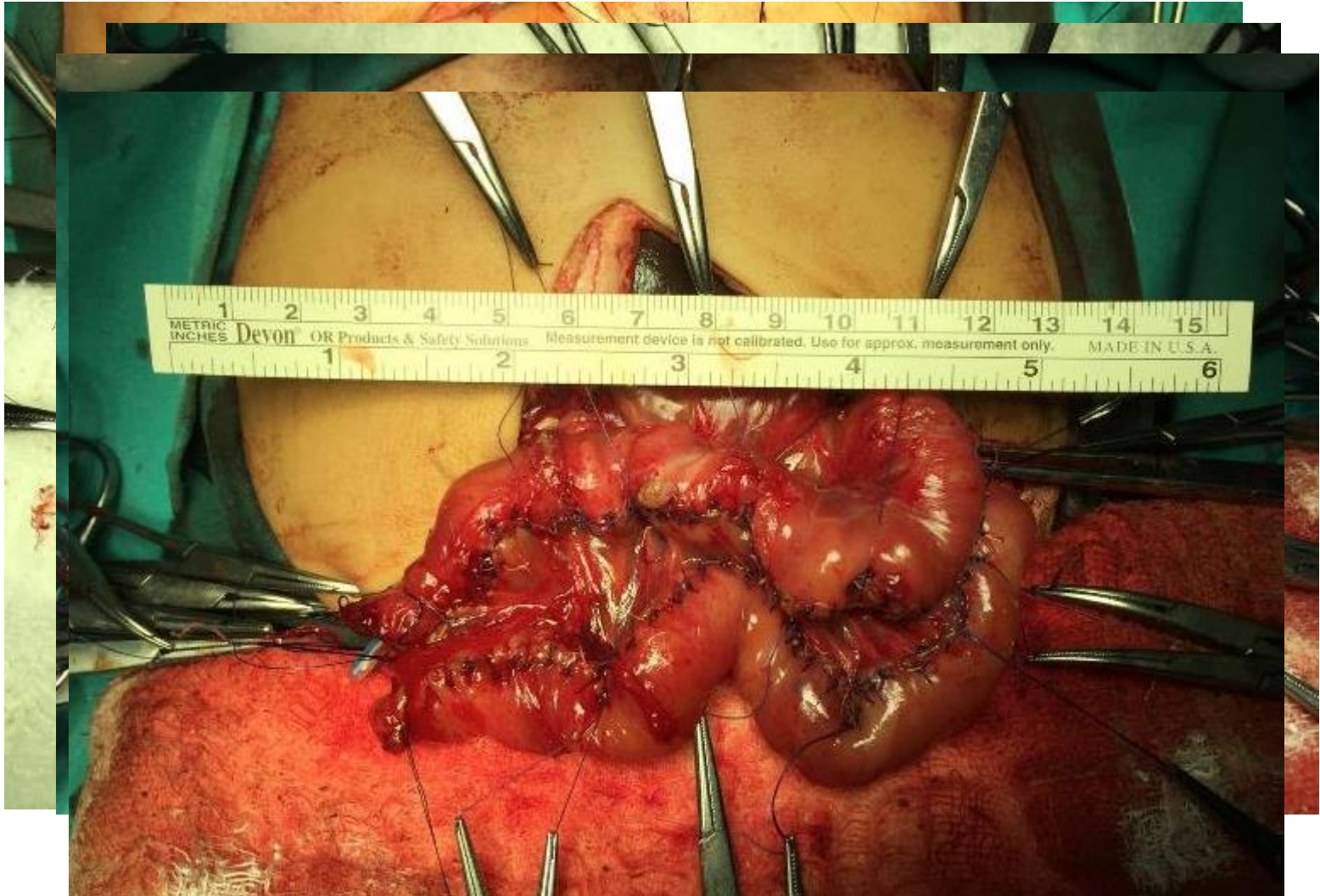


Dilate duodenum ve proksimal jejunum kısa bir
segmentle sonlanmaktadır

Operasyon

Bridektomi + distal ileal rezeksiyon (fibrotik) + appendektomi, proksimal jejunum divizyon-tubularizasyon-anastomoz (Bianchi) + jejunostomi + çekostomi + KC biopsisi





Postoperatif izlem

- PO 3. gün intraluminal stent çekildi
- PO 7. gün enteral beslenme başlandı
- PO 8. gün dren çekildi
- PO 2. hafta jejunooçekal anastomoz uygulandı
- Pediatrik Gastroenteroloji BD' a devredildi

Postoperatif pasaj grafisi



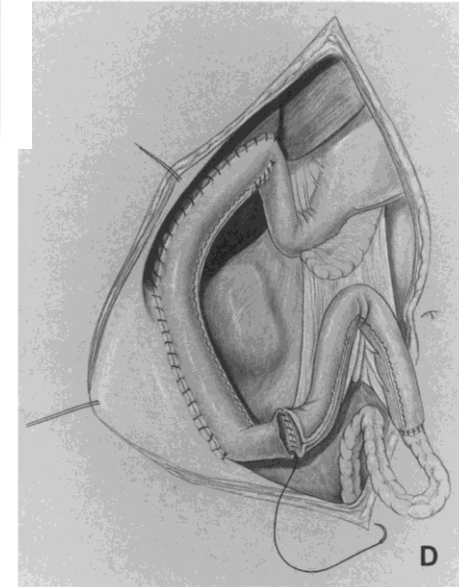
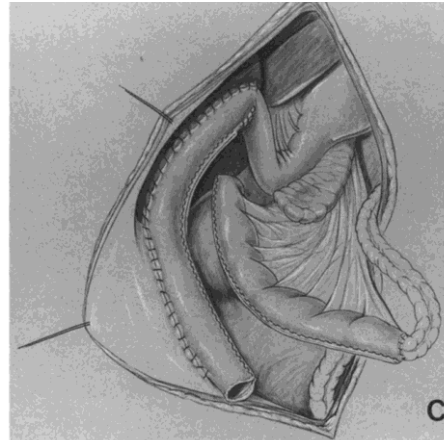
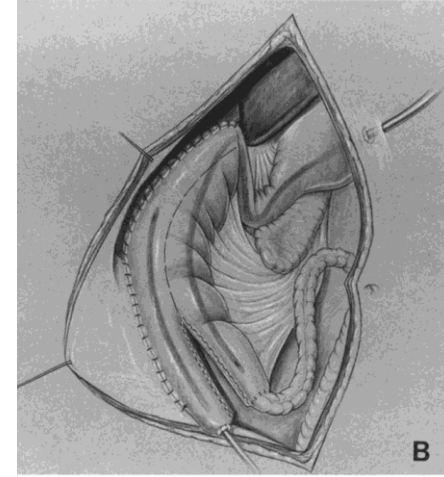
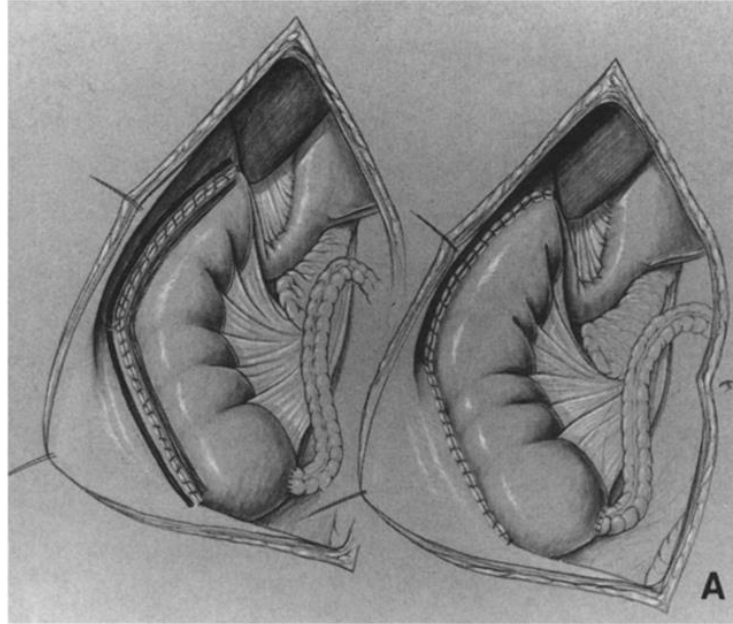


Cerrahi seenekler

Otolog barsak rekonstrüksiyon cerrahisi

- mukozal emilim yüzeyini arttırmayı hedefleyen

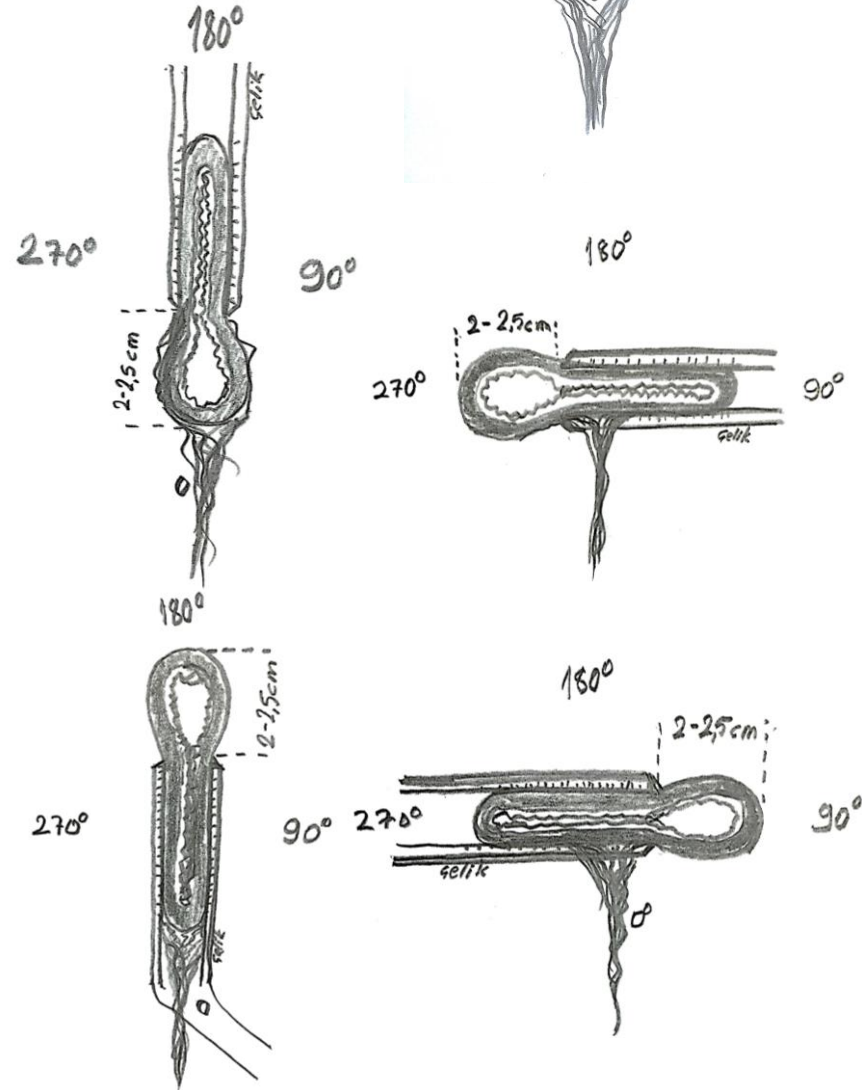
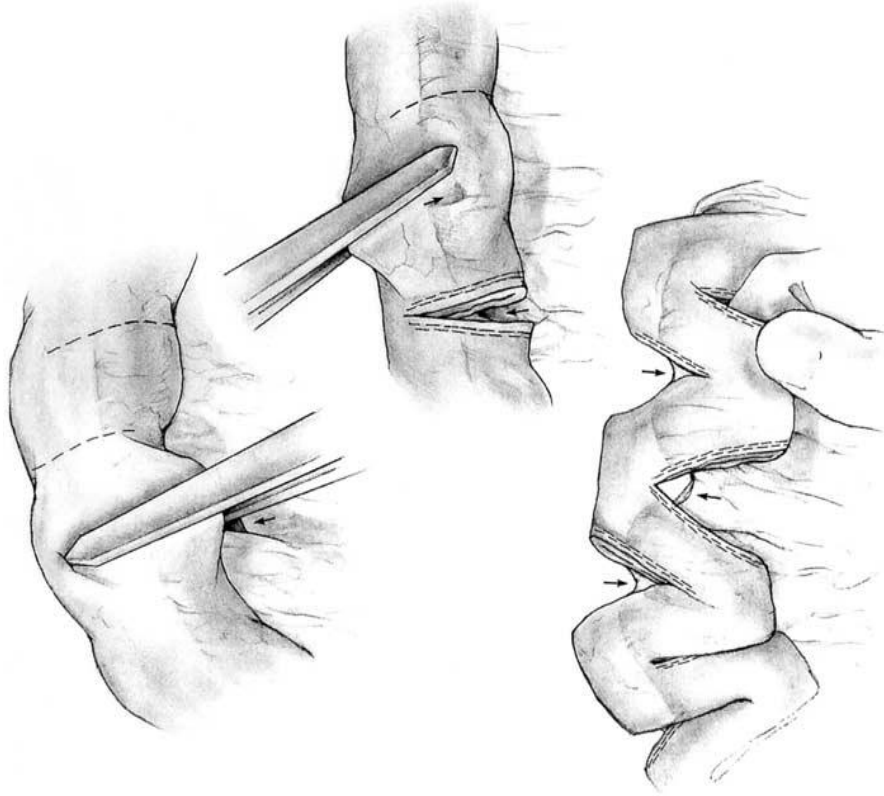
- Kimura(Iowa)



Cerrahi seçenekler

Otolog barsak rekonstrüksiyon cerrahisi

STEP: Seri(al) Transvers(e) EnteroPlasti(y)



STEP: Seri(al) Transvers(e) EnteroPlasti(y)

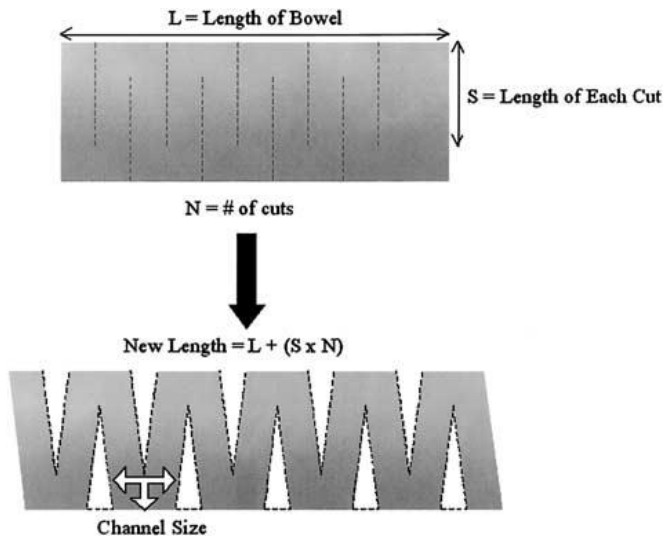
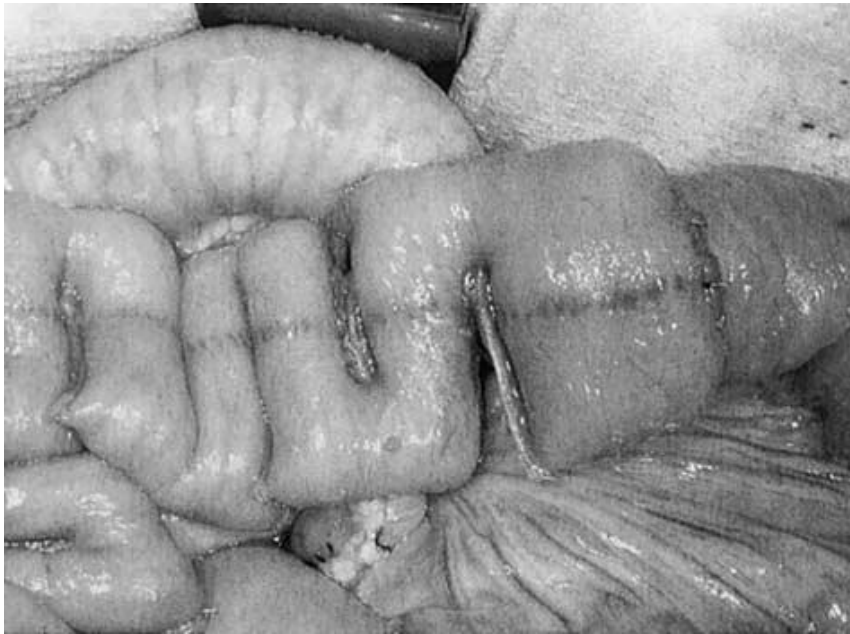


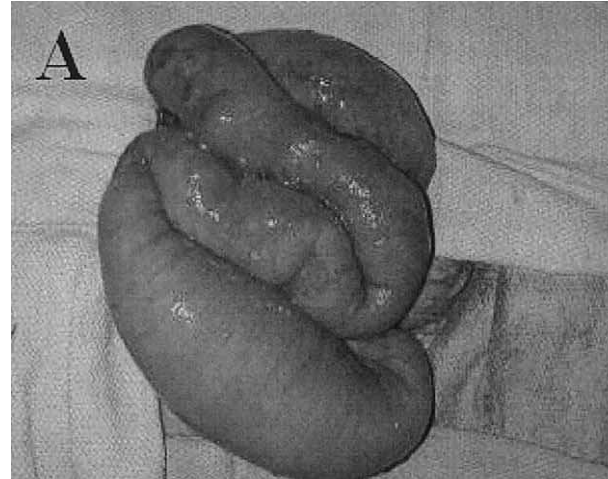
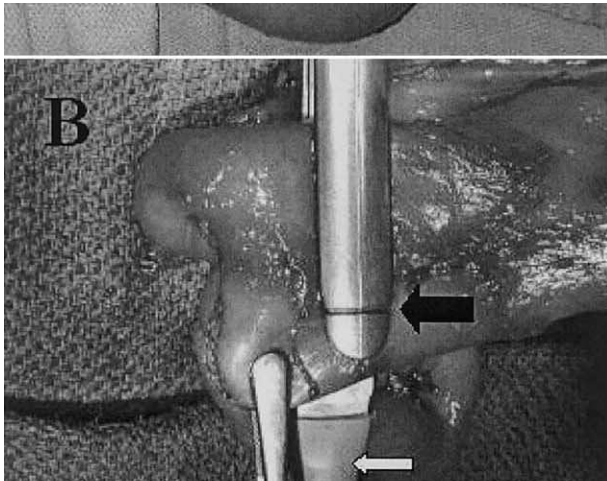
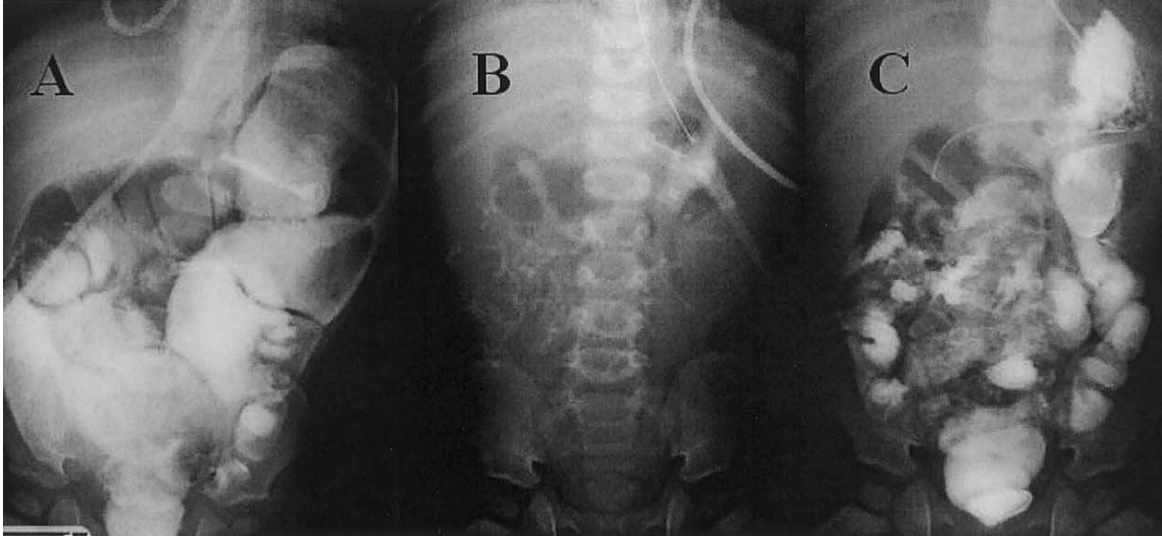
Table 1.

	Mean \pm SD
Weight (kg)	
Before STEP	42.5 \pm 3.5*
Harvest	66.7 \pm 3.0*
Bowel lengths during STEP procedure	
Before STEP	49.2 \pm 2.0
After STEP	82.8 \pm 6.7
Immediate increase	33.6 \pm 6.0
% Immediate increase	68 \pm 11%
Bowel lengths at harvest (cm)	
Control bowel length	57.2 \pm 10.4†
STEP bowel length	80.7 \pm 13.1†
Final increase	31.5 \pm 12.7
% Final increase	64 \pm 25%
Intestinal diameters (cm)	
Dilated bowel size	6.2 \pm 0.7
Initial STEP channel size	2.1 \pm 0.2
Final STEP channel size	4.3 \pm 0.7‡
Initial control bowel size	3.6 \pm 0.2
Final control bowel size	3.8 \pm 0.4‡













İlk klinik uygulama?

2003 te aynı ekip tarafından daha önce LILT yapılan (Gastrokizis) 2 y bir hasta



STEP kayıt sistemi 111 hasta

Table 2. Comparison of Demographic and Clinical Characteristics of 97 Patients in the International Serial Transverse Enteroplasty Data Registry with Respect to Poor Outcomes (Death or Transplantation)

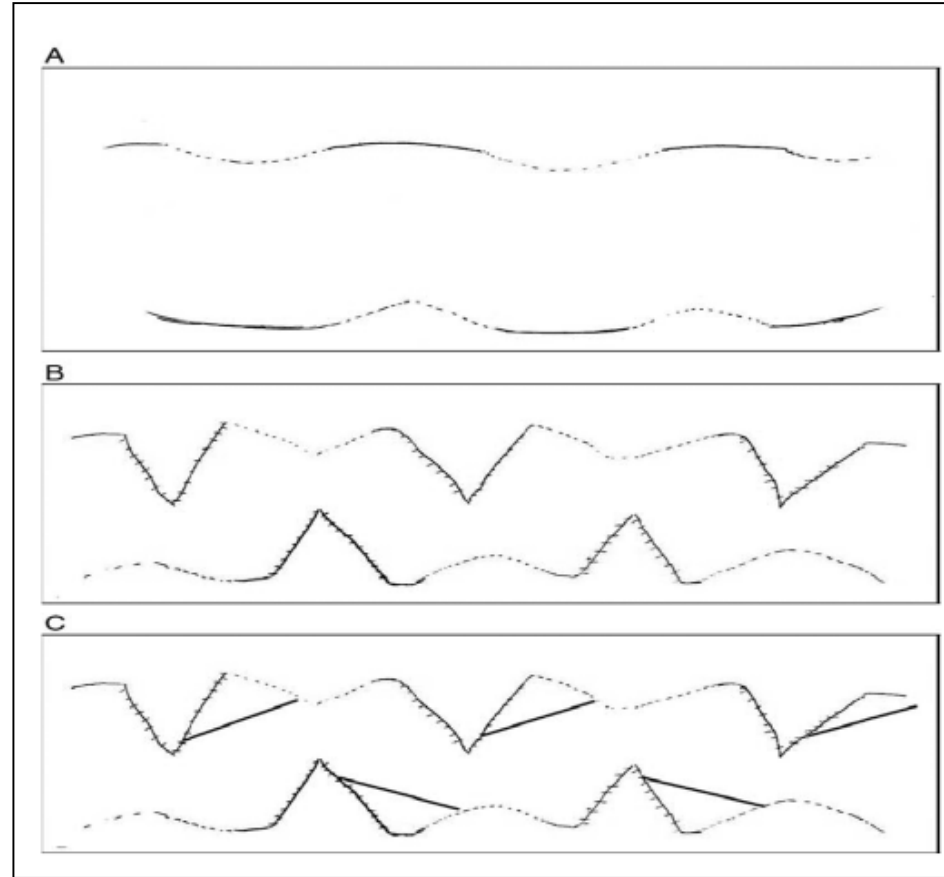
Variable	Death/transplant (n = 16)		Survival (n = 81)	p Value
Sex, male, n (%)	7 (44)		48 (59)	0.28
Ethnicity, n (%)				0.25
Black	3 (20)		8 (11)	
White	7 (47)		50 (67)	
Asian	0 (0)		6 (8)	
Hispanic	5 (33)		11 (15)	
Unknown	1 (6)		6 (7)	
Gestational age, wk, mean \pm SD (n = 82)	34 \pm 3		35 \pm 3	0.55
Age at STEP, mo, median (IQR) (n = 97)	3.9 (1.4–8.2)		6.6 (2.4–37.8)	0.11
Weight at STEP, kg, median (IQR) (n = 81)	5.0 (3.3–7.0)		5.7 (3.7–14.8)	0.27
Preoperative enteral nutrition, %, median (IQR) (n = 87)	0 (0–16)		10 (0–55)	0.09
Laboratory values at STEP				
Total bilirubin, mg/dL, median (IQR) (n = 73)	9.0 (2.0–15.3)		1.9 (0.5–8.0)	0.00
Direct bilirubin, mg/dL, median (IQR) (n = 59)	7.3 (1.6–9.5)		1.2 (0.1–5.9)	0.01
INR, mean \pm SD (n = 50)	1.15 \pm 0.19		1.17 \pm 0.21	0.81
Operative data, cm, median (IQR)				
Pre-STEP bowel length (n = 92)	30 (18–40)		49 (28–85)	0.01
Pre-STEP bowel width (n = 80)	4.0 (3.8–6.0)		5.3 (4.0–7.0)	0.04
Post-STEP bowel length (n = 81)	52 (34–77)		75 (49–117)	0.02
Post-STEP bowel width (n = 84)	1.8 (1.0–2.0)		2.0 (1.5–2.5)	0.06
Staple firings (n = 94)	9 (5–13)		10 (7–17)	0.10
Presence of ileocecal valve, n (%) (n = 95)	5 (31)		25 (32)	0.99

INR, international normalized ratio; IQR, interquartile range (25% to 75%); STEP, serial transverse enteroplasty.

Tekrar STEP?

Insanda ilk kez(2007) Ehrlich yayınladı

Andres(2008) 14 olguda (7LILT-7STEP sonrası)



LILT-STEP

Frongia G, Kessler M, Weih S, Nickkolgh A, Mehrabi A, Holland-Cuz S. Comparison of LILT and STEP procedures in children with short bowel syndrome-A systematic review of the literature. J Pediatr Surg 2013; 48; 1794-1805

Data search, using the keywords “bowel lengthening”, “intestinal lengthening”, “longitudinal intestinal lengthening and tailoring”, “lilt”, “bianchi procedure”, “serial transverse enteroplasty” and “step procedure”. Potentially relevant articles identified and screened for retrieval (n = 4282)

Mortality!!!

LILT: 30,2% - STEP: 14,3%
perop —

Table 2 Surgical complication rates in % of cases after LILT and STEP.

	LILT	STEP
Bleeding	16.1 (0–71.4)	22.2 (7.1–33.3)
Obstruction/Stricture	17.7 (7.4–42.8)	17.5 (5.3–33.3)
Leakage	13.2 (4.1–22.2)	12.1 (5.3–16.7)
Abscess	6.6 (2.0–11.1)	2.6
Intestinal necrosis	10.6 (7.4–16.7)	n.r.
Intestinal perforation	10.1 (3.7–14.3)	n.r.
Fistula	7.4 (3.7–12.2)	n.r.

Mean (min–max), n.r. = not reported.

Uzun dönem sonuçlar?

13/14 (%93): bir veya daha fazla komplikasyon gelişmiş

tekrar dilatasyon!?

Tıkanıklık --aşırı adaptasyon

Table 3 Outcomes grouped by redilation status

	Redilated (n = 8)	No redilation (n = 6)	<i>P</i>
LILT	4	3	1.0
STEP	6	3	
Death	2	0	.46
Postoperative bowel length (cm)	70 ± 28	60 ± 36	.39
Weaned off PN	1	5	.03
Age	3.1 ± 3.5	2.8 ± 3.2	.69
BO	4	5	.30
GI bleed	5	2	.59
Reoperation	7	0	.005

Table 2 Complications after ILP

Complication	LILT	Time to complication (y)	Range	STEP	Time to complication (y)	Range	<i>P</i> for complication rate	<i>P</i> for time to complication
Dilation	4	3.4	0.6-5.5 y	6	1.5	2 mo-3.3 y	1.0	.13
BO	3	6.4	4.4-10 y	6	2.1	3 mo-4.5 y	.37	.03
GI bleed	5	2.3	2 mo-10.3 y	3	3.1	1.3-4.1 y	.31	.74
Reoperation	5	4.3	5 mo-9 y	3	0.9	7 mo-1.4 y	.31	.12
Adhesive SBO	5	2.0	5 mo-5.5 y	2	1.0	7 mo-1.4 y	.13	.54
Stricture	1	0.3	3 mo	1	1.4	1.4 y	1.0	1.0
Death	1	4.5	4.5 y	1	1.5	1.5 y	1.0	1.0

Multiple complications allowed per patient. SBO indicates small bowel obstruction.

*Eiichi A. Miyasaka, Pamela I. Brown, Daniel H. Teitelbaum. Redilation of bowel after intestinal lengthening procedures—an indicator for poor outcome. Journal of

Karşılaştırma

2013 e kadar en son 4 seri

Table 1. Comparison between outcomes of patients undergoing bowel-lengthening procedures reported in the four articles analyzed

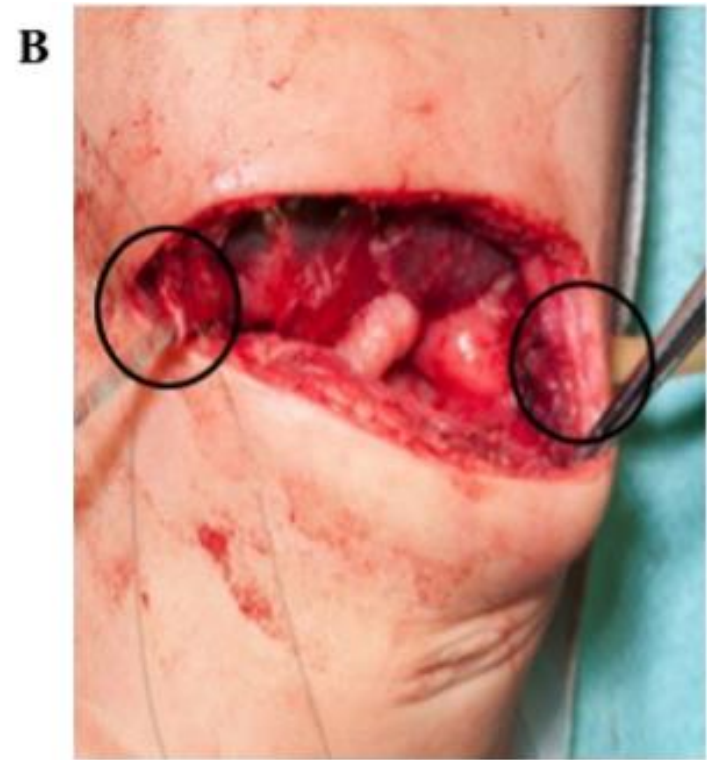
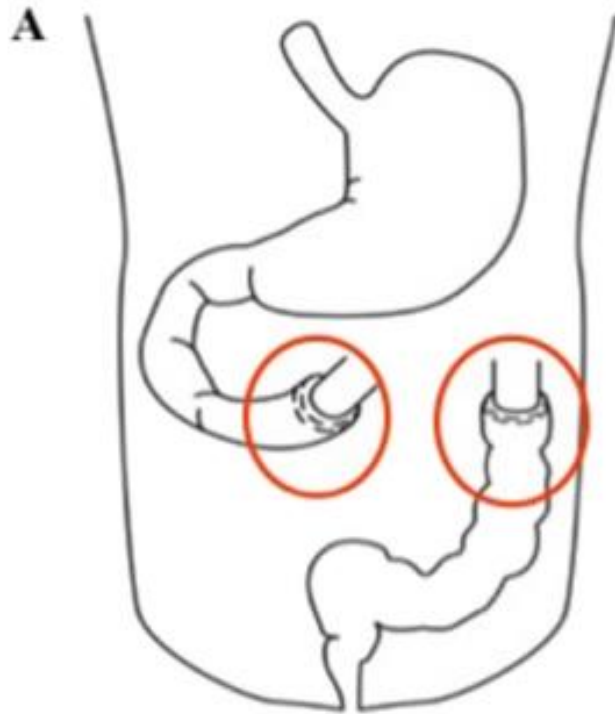
Authors	Survival (%)		Weaning (%)		Improvement (%)		Transplantation (%)		Complications (%)	
	B	S	B	S	B	S	B	S	B	S
King <i>et al.</i> [20 [■] ■]	81	89	54	47	82	85	–	–	17	26
Sudan <i>et al.</i> [21]	88	95	55	60	–	–	19	5	37	37
Miyasaka <i>et al.</i> [23]	86	89	55	54	–	–	14	0	–	–
Yannam <i>et al.</i> [22]	–	–	50	64	–	–	0	1	50	14

B, Bianchi longitudinal intestinal lengthening and tailoring; S, serial transverse enteroplasty.

Kontrollü doku ekspansiyonu

Murphy F, Khalil BA, Gozzini S, King B, Bianchi A, Morabito A.:

Controlled tissue expansion in the initial management of the short bowel state. World J Surg. 2011;35:1142

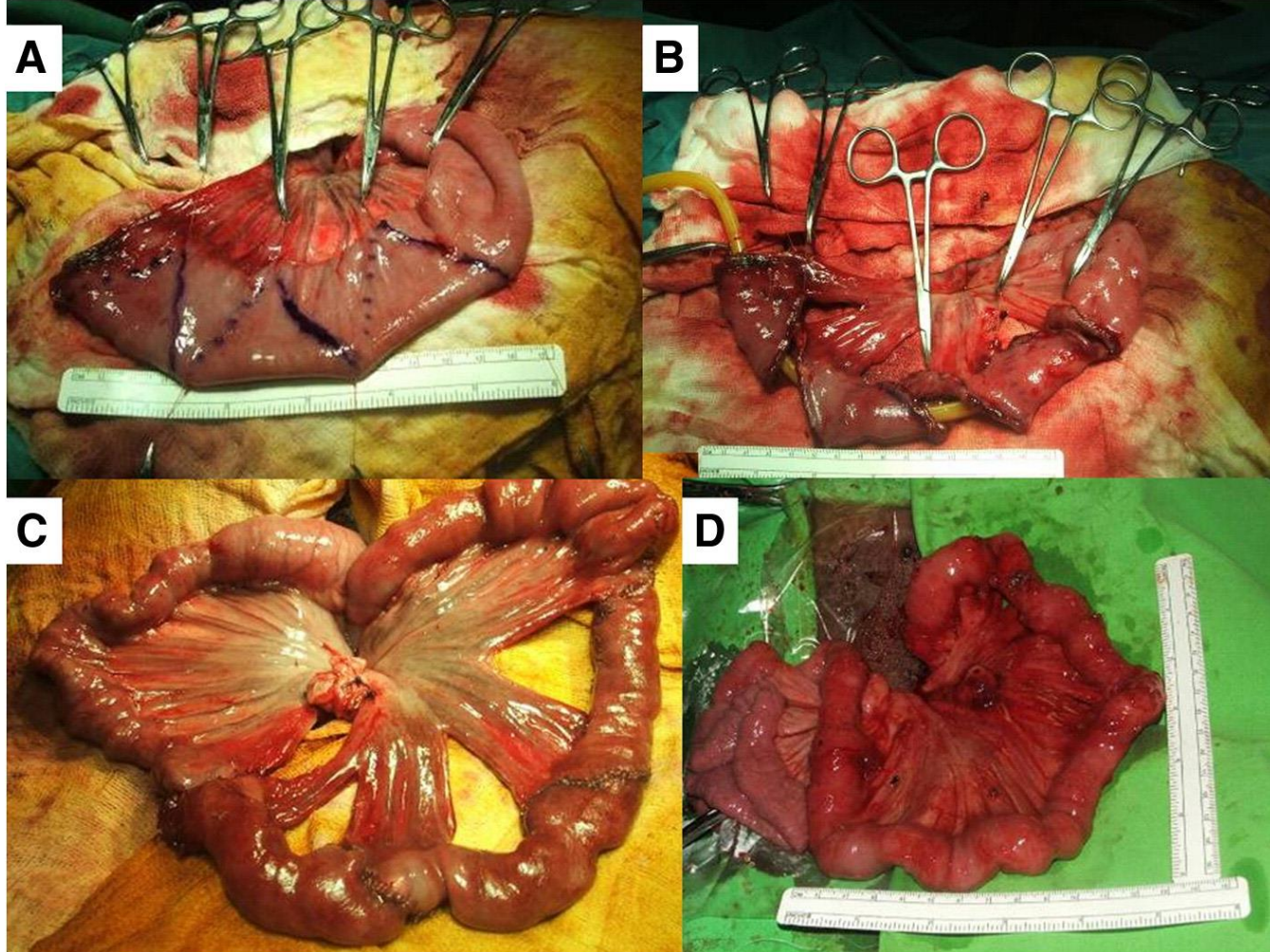


Cerrahi seçenekler

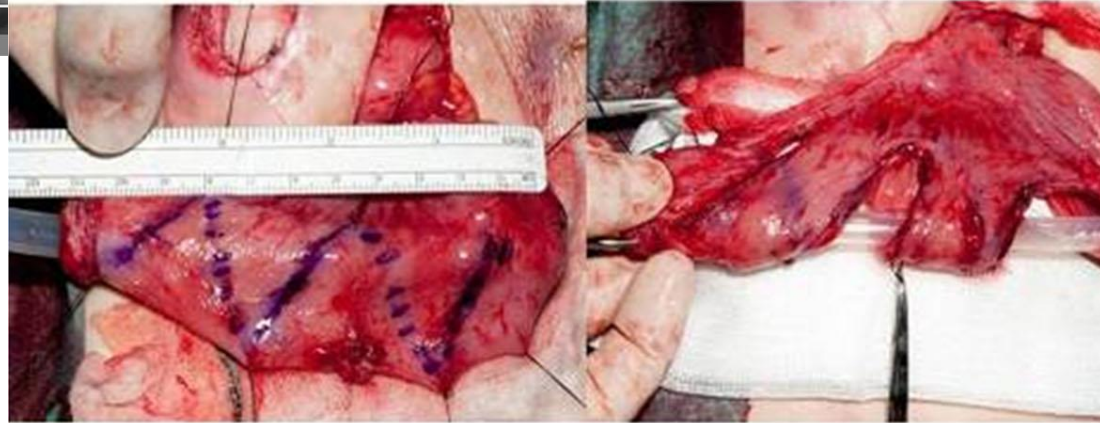
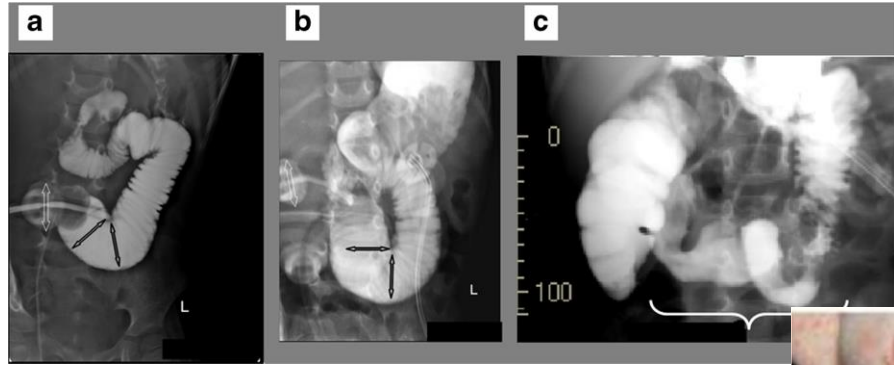
Otolog barsak rekonstrüksiyon cerrahisi

- Motilite/ emilim zamanını arttırmayı hedefleyen
- SILT: spiral intestinal lengthening and tailoring

J Pediatr Surg 2013; 48: 1907-1913









SILT ilk klinik uygulaması 2014,



Uzatma karşılaştırması

Table 1 The table compares LILT, STEP and SILT procedures in terms of mesentery handling, adjustability of the lengthening and tailoring, and shows the change in the orientation of the muscle fibres

Procedure	Mesentery handling	Lengthening and tailoring	Muscle fiber orientation
<p>LILT</p> 	difficult	tailors diameter in half	 <p>not altered</p>
<p>STEP</p> 	minimal	adjustable	 <p>fully altered</p>
<p>SILT</p> 	minimal	adjustable	<p>minimally altered</p> 

Modifiye SILT

- Hayvan deneyi: spiral miyotomi

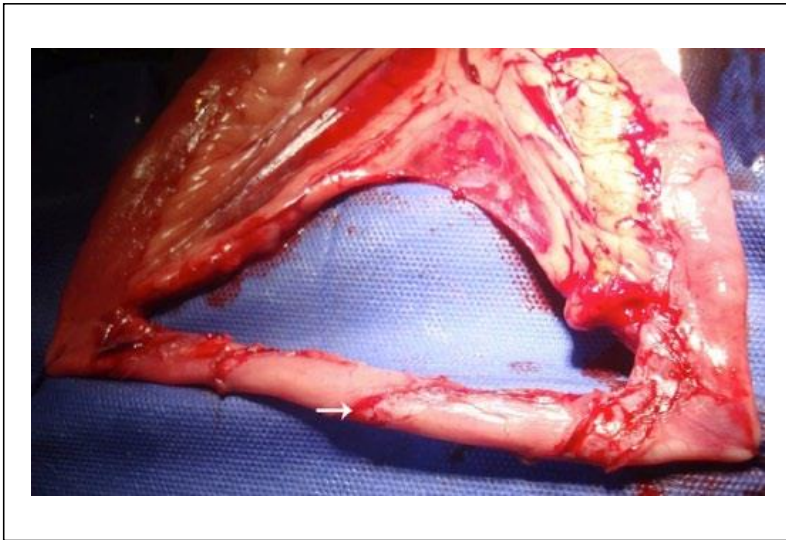


Figure 4. For the modified SILT procedure a longitudinal and spiral incision of the serosal and muscular layers of the intestinal segment is performed. Meticulous caution is exercised to leave the mucosa intact (arrow).

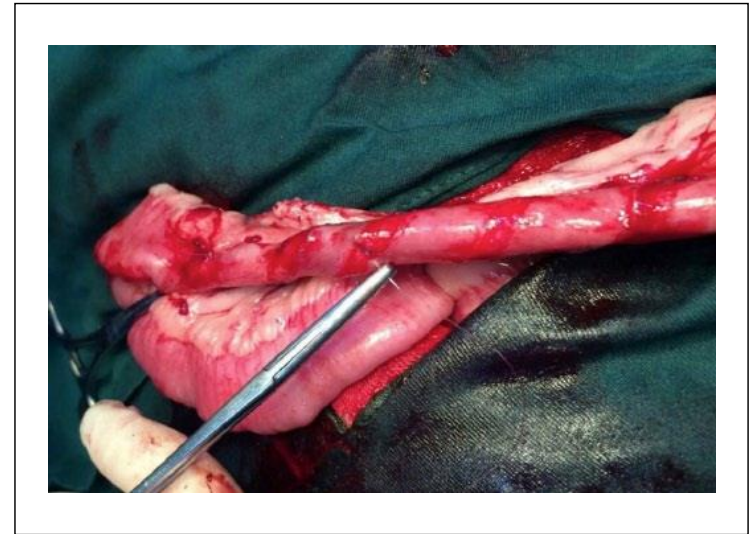


Figure 5. The adjacent intestinal serosal and muscular borders of the spirally and longitudinally stretched intestinal segment are sutured. This results in a longer and tailored intestinal segment, without the necessity of opening of the mucosa.

Kombine uygulamalar Manchester modeli

R. Coletta et al. / *Seminars in Pediatric Surgery* 23 (2014) 291–297

2

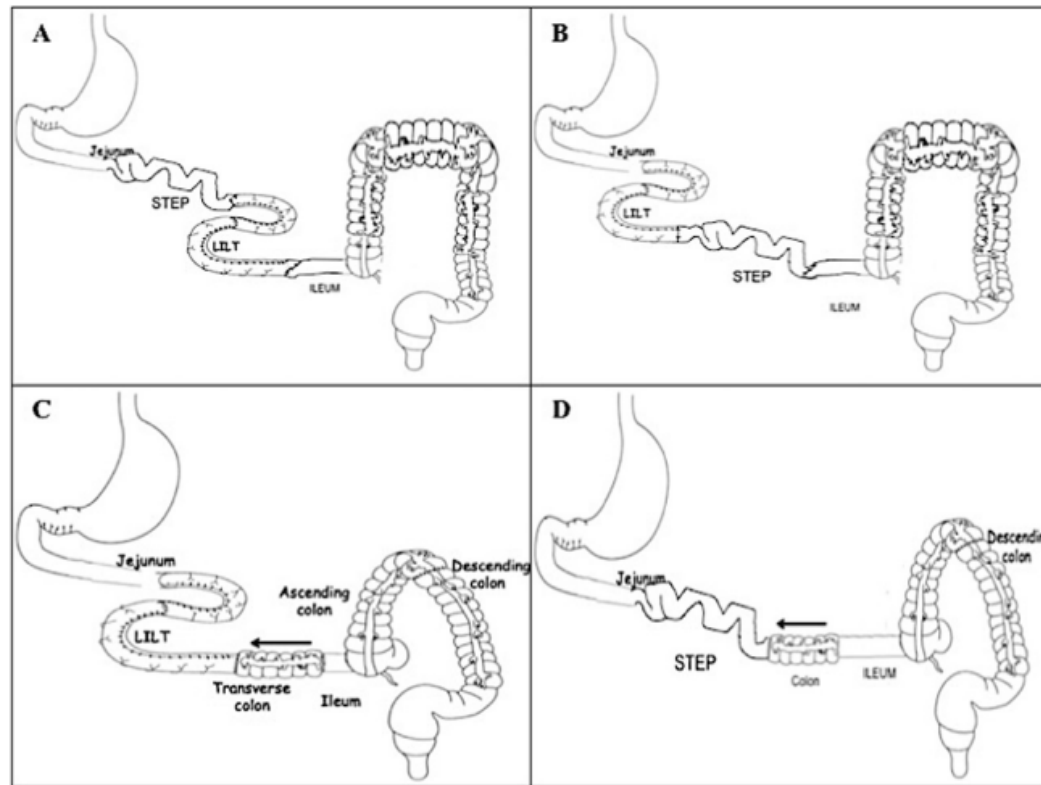


Fig. 5. Combined simultaneous procedures: (A) STEP and LILT; (B) LILT and STEP; (C) LILT and reverse colonic interposition; and (D) STEP and reverse colonic interpositi

Motilite sorunlarında cerrahi?

%5-10 BY nedeni
%60-80 TPN bağımlı
%20-66 mortalite

- CIPO (nöropatik/miyopatik formlar)
 - Barsak motor ve propulsif aktivite bozuk
 - Tekrarlayıcı kronik fonksiyonel tıkanıklık---- Barsak yetmezliği
 - Bakteriyel aşırı çoğalma—barsak kaybı--BY
 - **Cerrahi:**
 - Girişimlere dikkat!! rezeksiyondan kaçın
 - Gastrostomi-jejunostomi-gastrojejunostomi-duodenoplasti vb
 - Uç stoma-kolektomi-hemikolektomi-parsiyel rezeksiyonlar vb
- Total intestinal veya totale yakın HH
 - %2-5
 -
 - **Cerrahi:**
 - Total ise 40 cm barsak bırak ! Jejunostomi/Ziegler-miyotomi/miyektomi
 - Jejunal ise seçenekler fazla-KİMURA/DM/LILT/IIPIP vs

permit proximal propulsive forces to be able to push luminal content through, resulting in a functional obstruction and or intraluminal stasis. At the selected site, the bowel should exit as a stoma, and venting of distal small bowel and colon may be optimal. Residual distal small and large bowel should not initially be discarded.

The Myectomy-Myotomy

Whether a seromuscular 1-cm strip of tissue to the level of submucosa is excised or whether a Ramstedt type of myotomy is done is not critical because both are effective in relieving aganglionic segment obstruction (see Figures 1 and 2). The longitudinal elevation of an excised seromuscular strip whose plane of dissection was augmented by the intramural injection of saline or 1:100,000 epinephrine was technically easier for us. In the authors' personal cases, although the myectomized bowel was left in continuity with the proximal bowel, there were three cases in this series where the myectomized conduit was isolated from the *in situ* bowel as a Thiry-Vella loop. It is one of these cases that has progressed to complete enteral nutrition. Enterotomies cre-

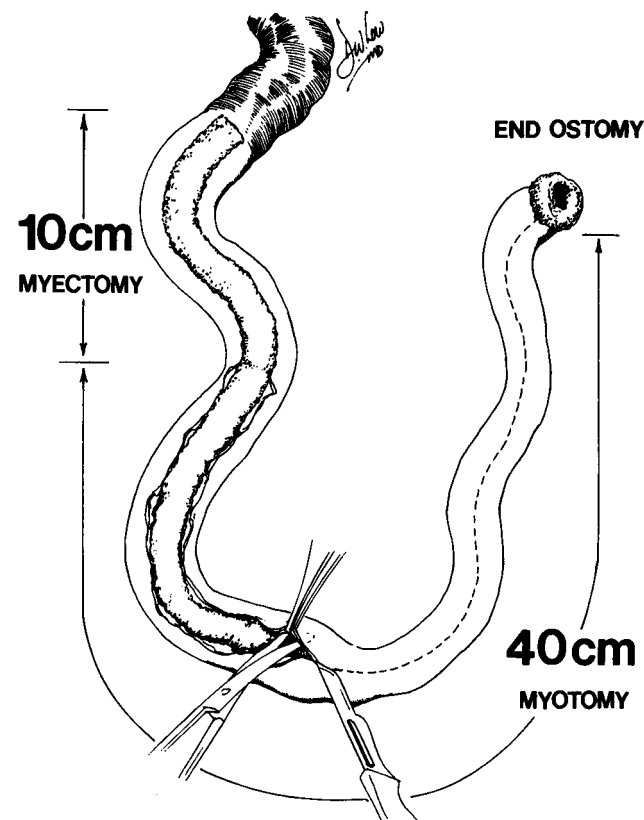
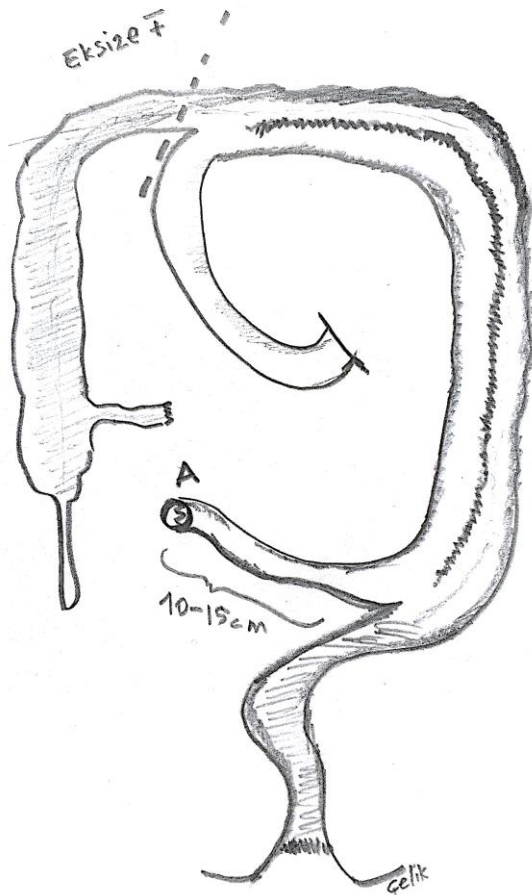
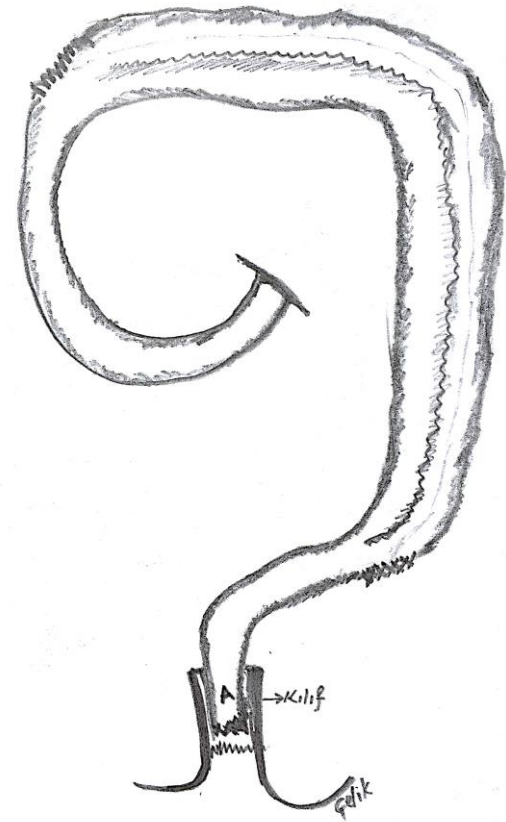


Figure 2. Techniques of a 40-cm jejunal myotomy coupled with a proximal myectomy as done in case 1 of this series. Reprinted with permission

IPIP: isoperistaltic ileocolic patch ileal pullthrough



1. seans



2. seans

M.S. (WS Tip 4+i-jejunal uzanımlı HH)

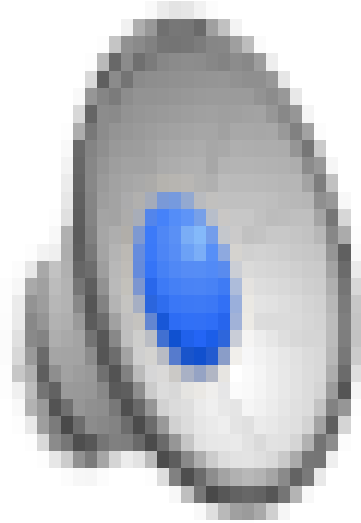
- IPIP???: İzoperistaltik ileo?-jejunokolik yama

Preop kolon grafisi



M.S.

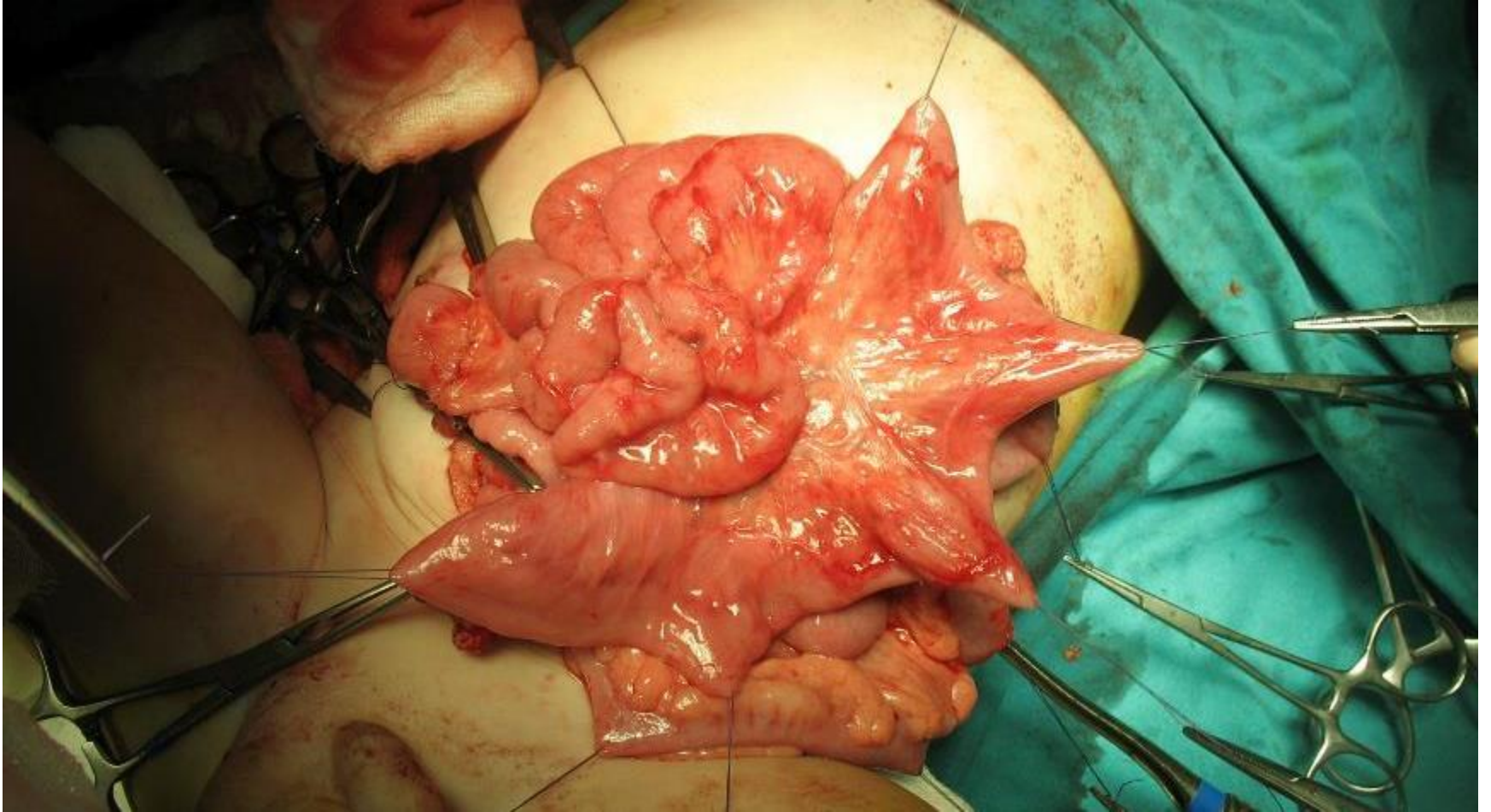
preop pasaj görüntüsü



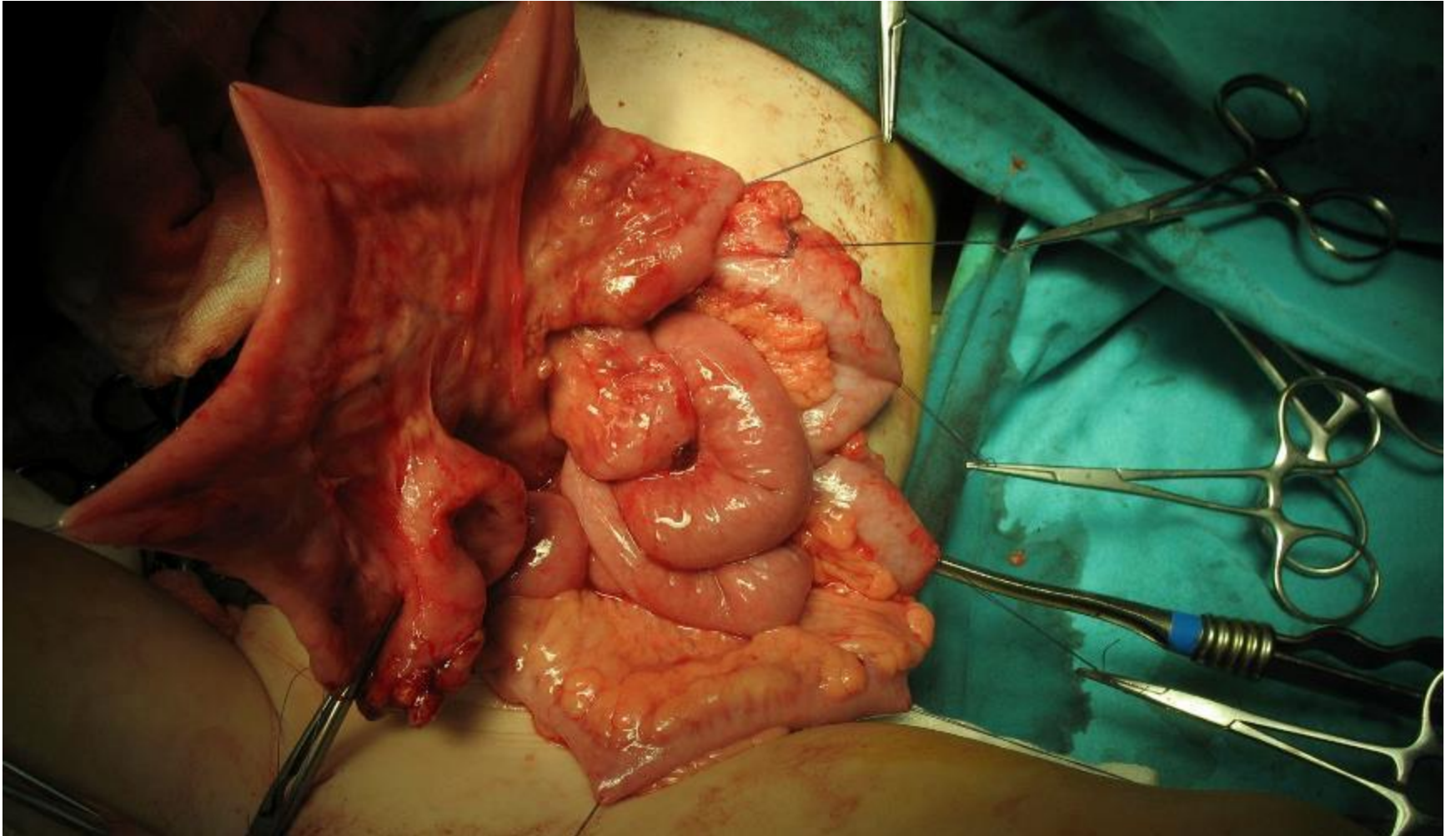
M.Y.: Dw.S. (ileal uzanımlı total kolonik HH)



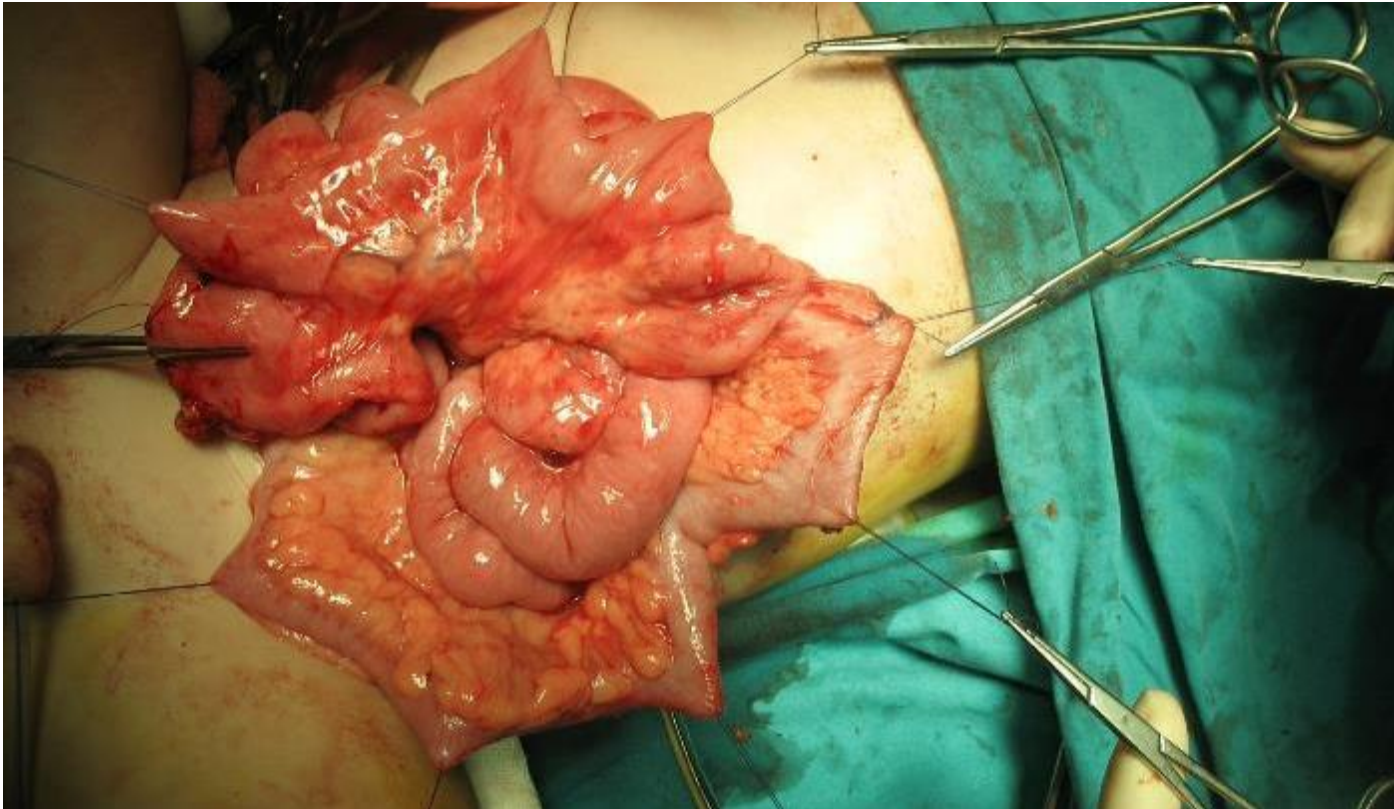
iipip-modifiye (DS total kolonik)



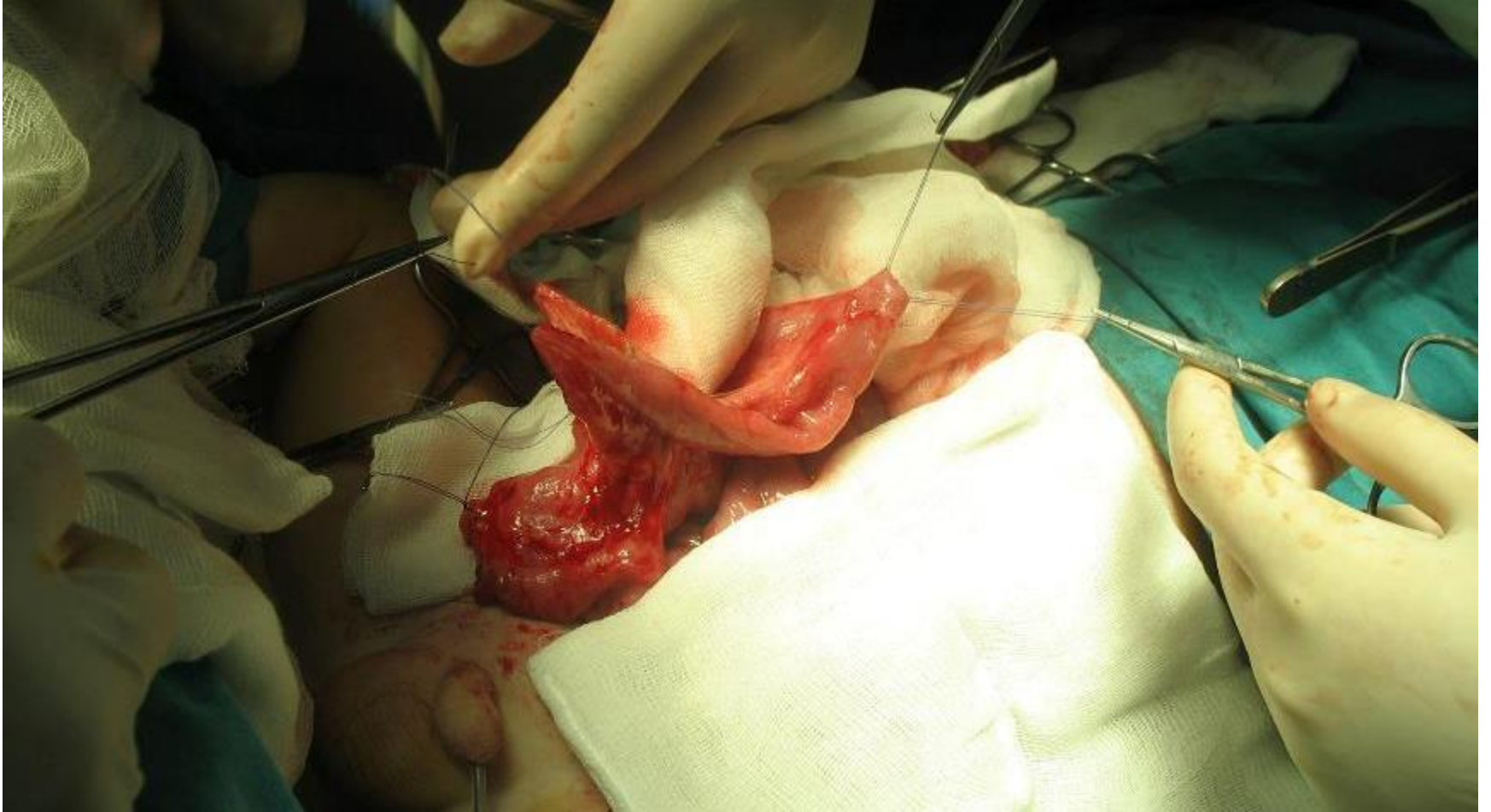
oryantasyon



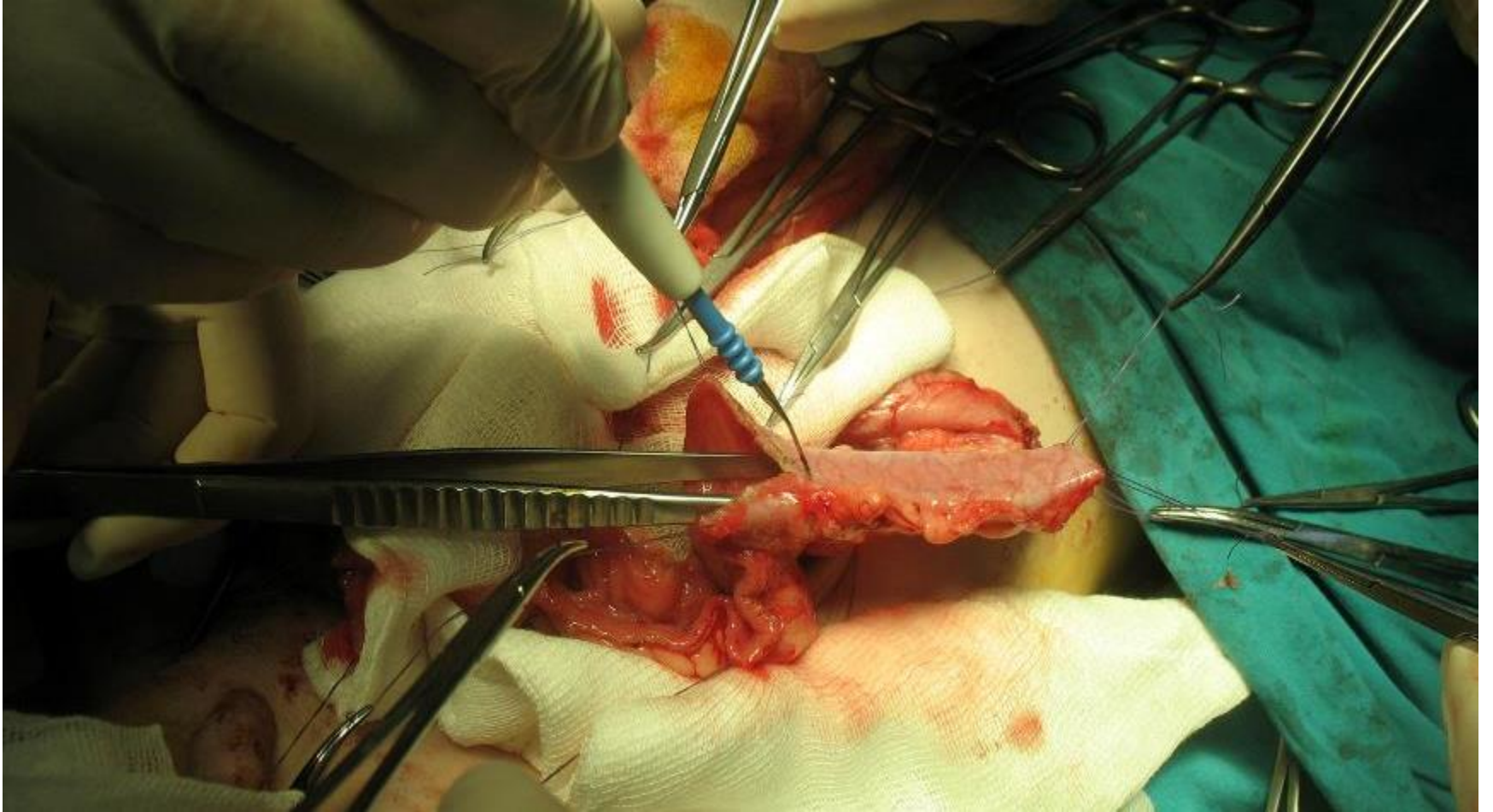
oryantasyon



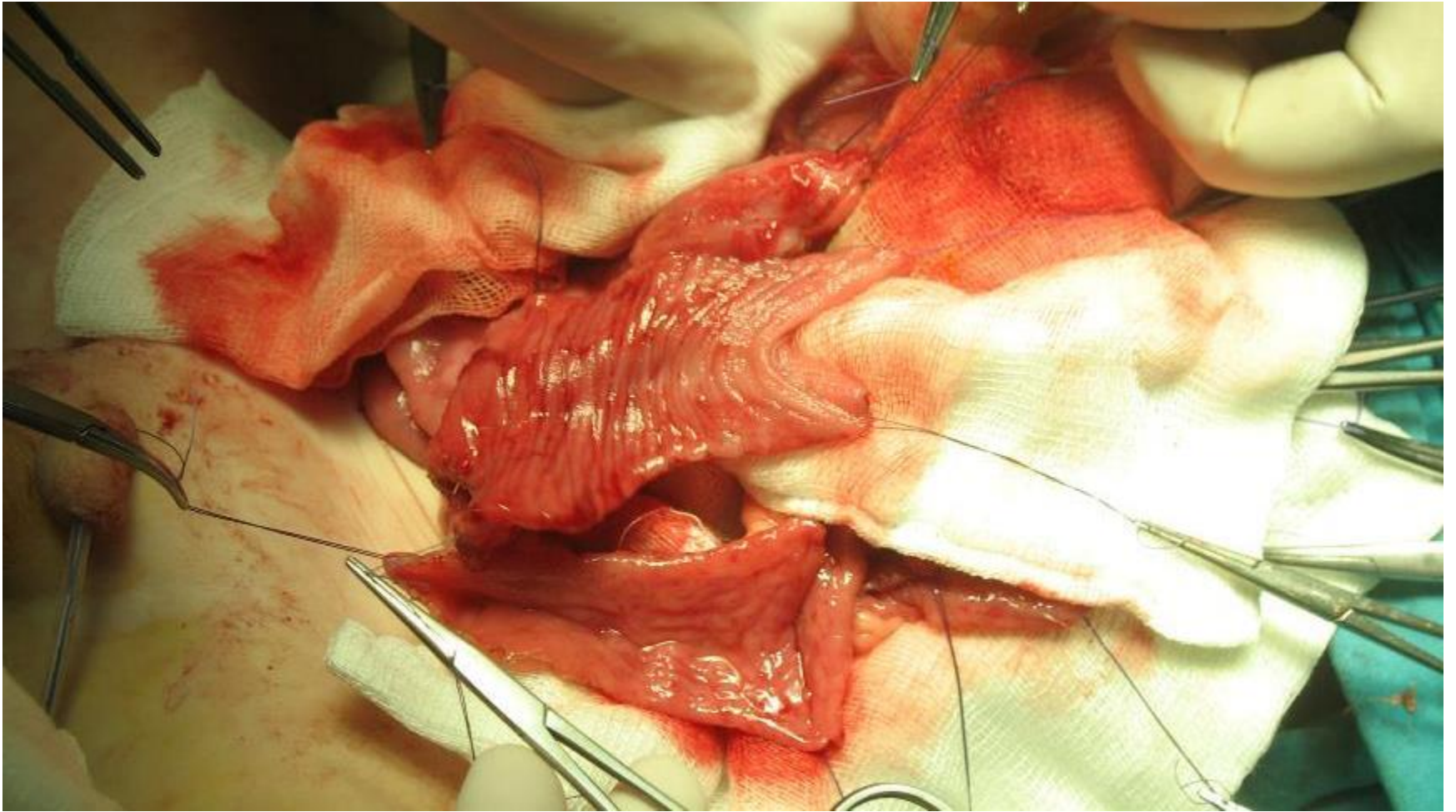
Antimezenterik uzunlamasına açma-ince barsak



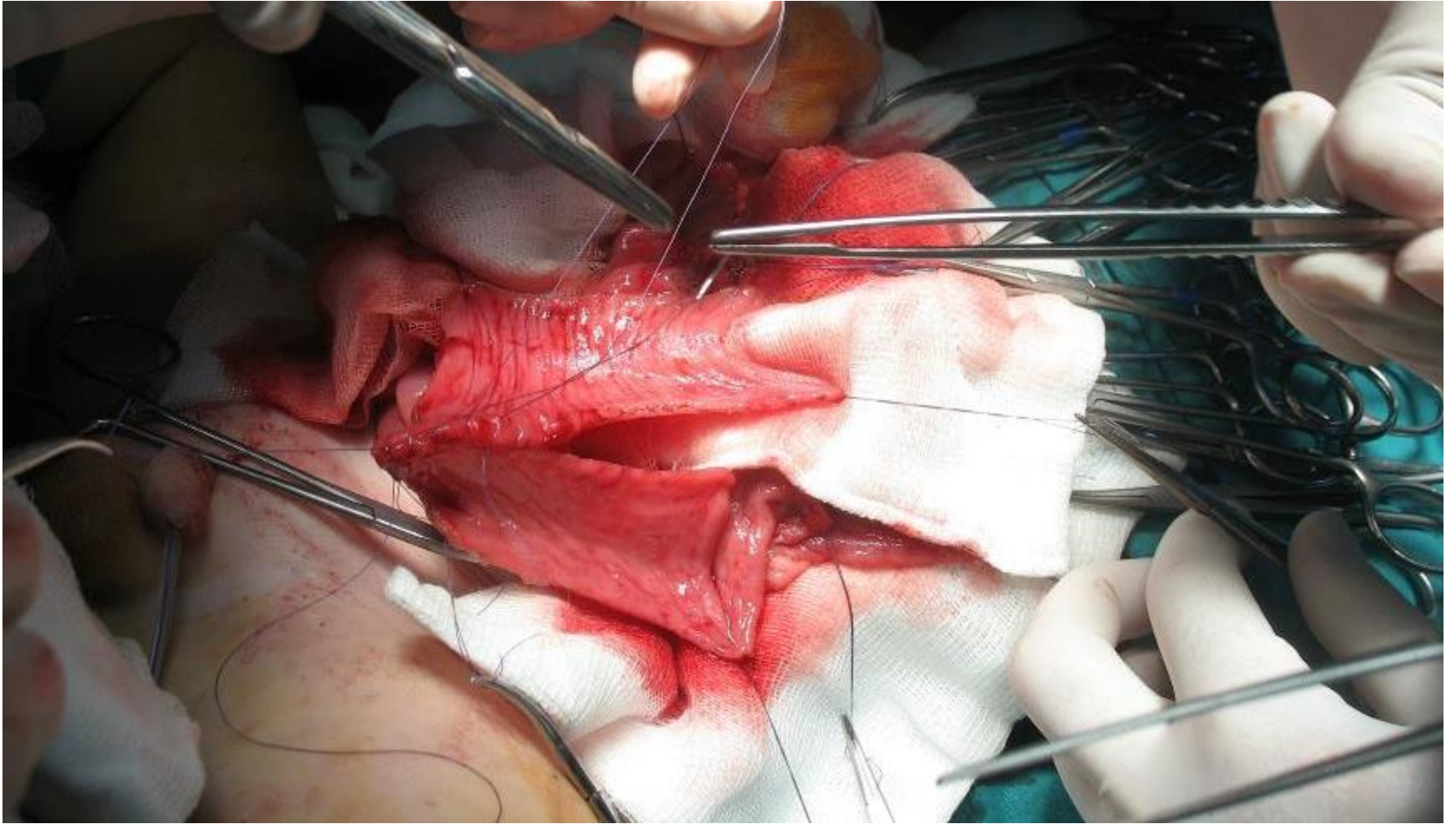
Antimezenterik uzunlamasına açma-kolon



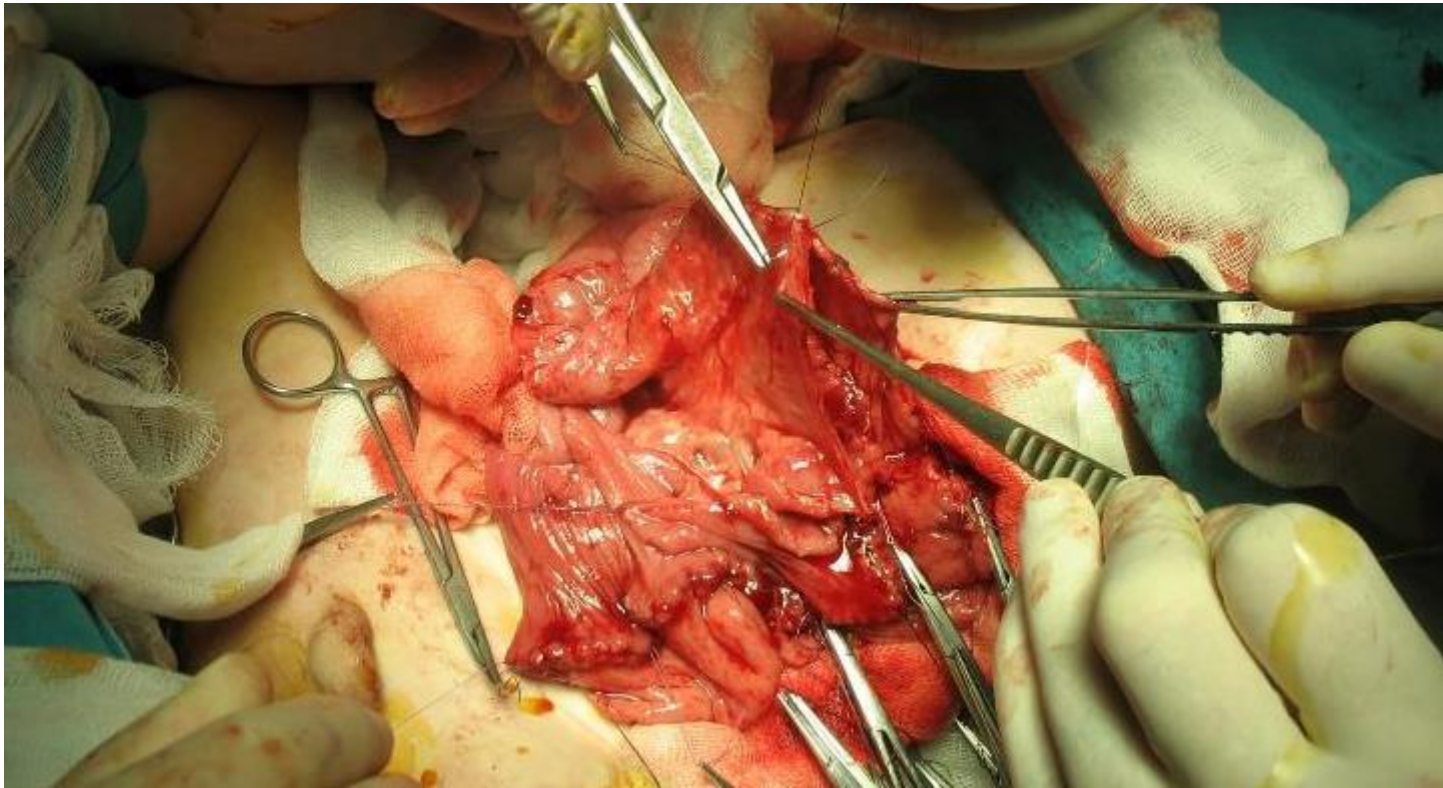
Arka duvar

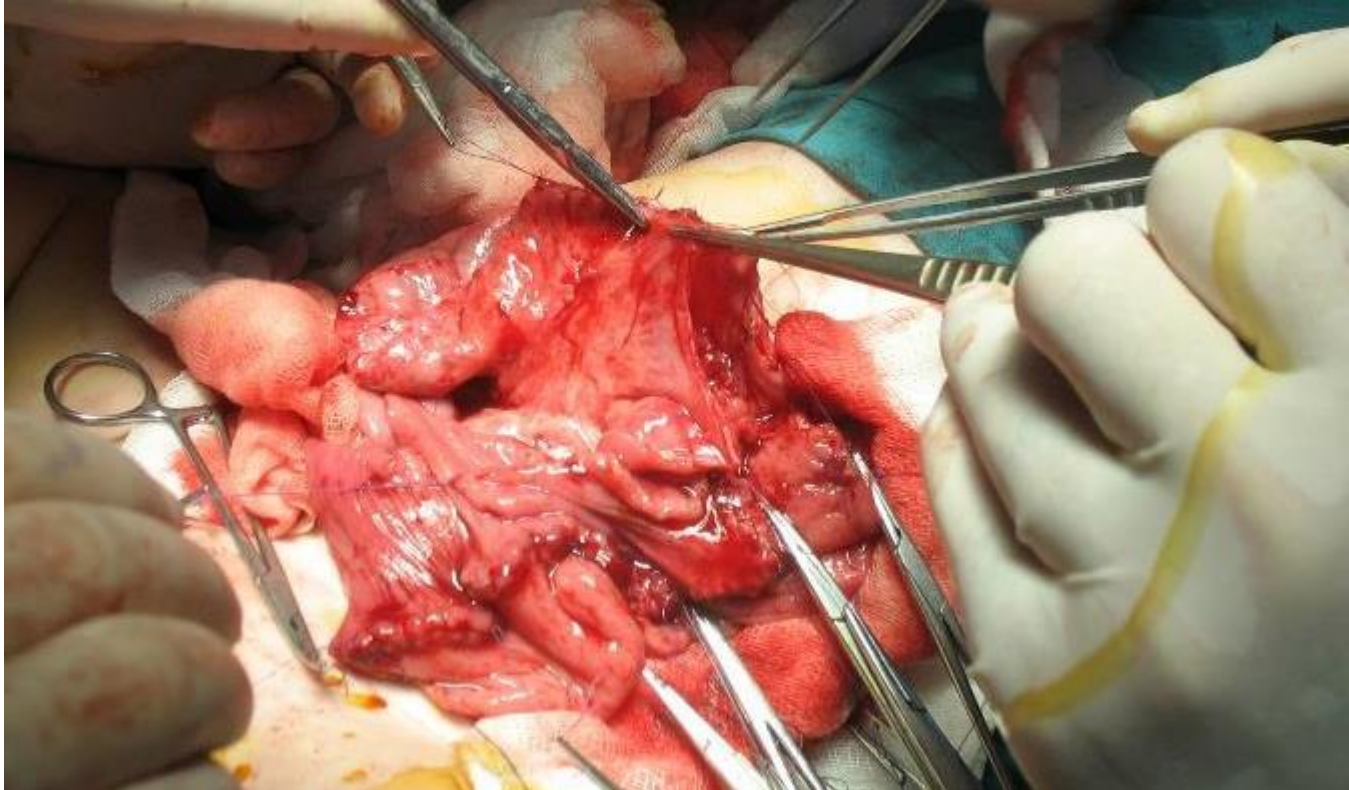


Arka duvar



Ön duvar

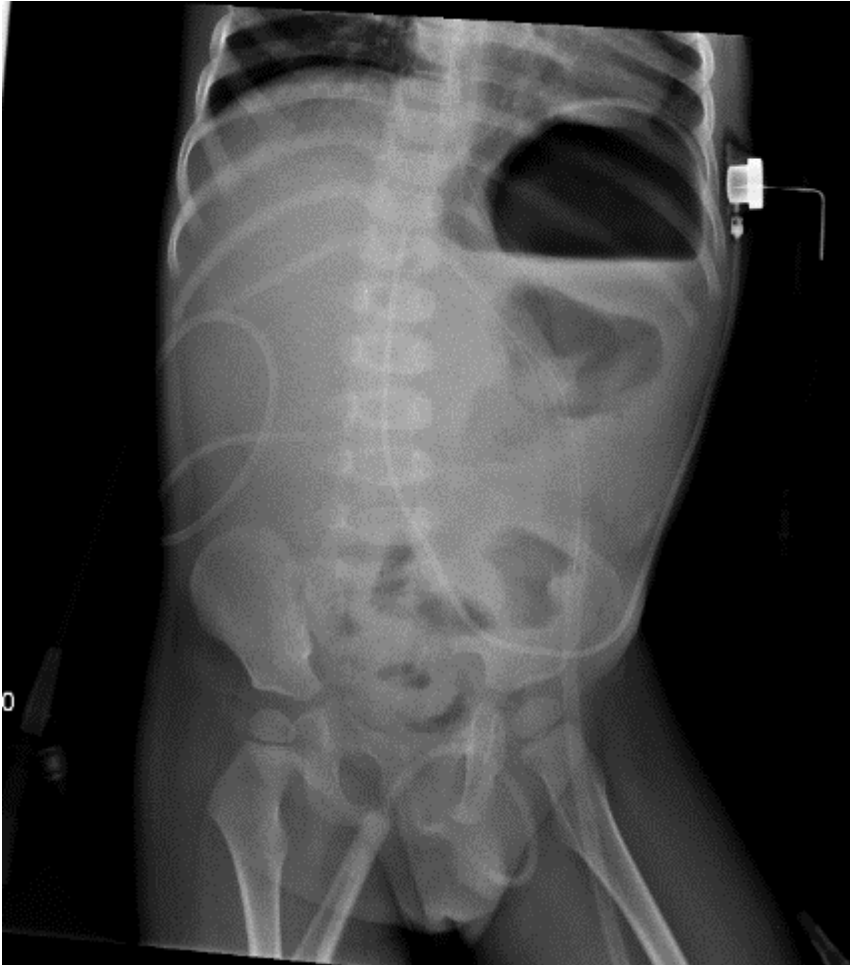




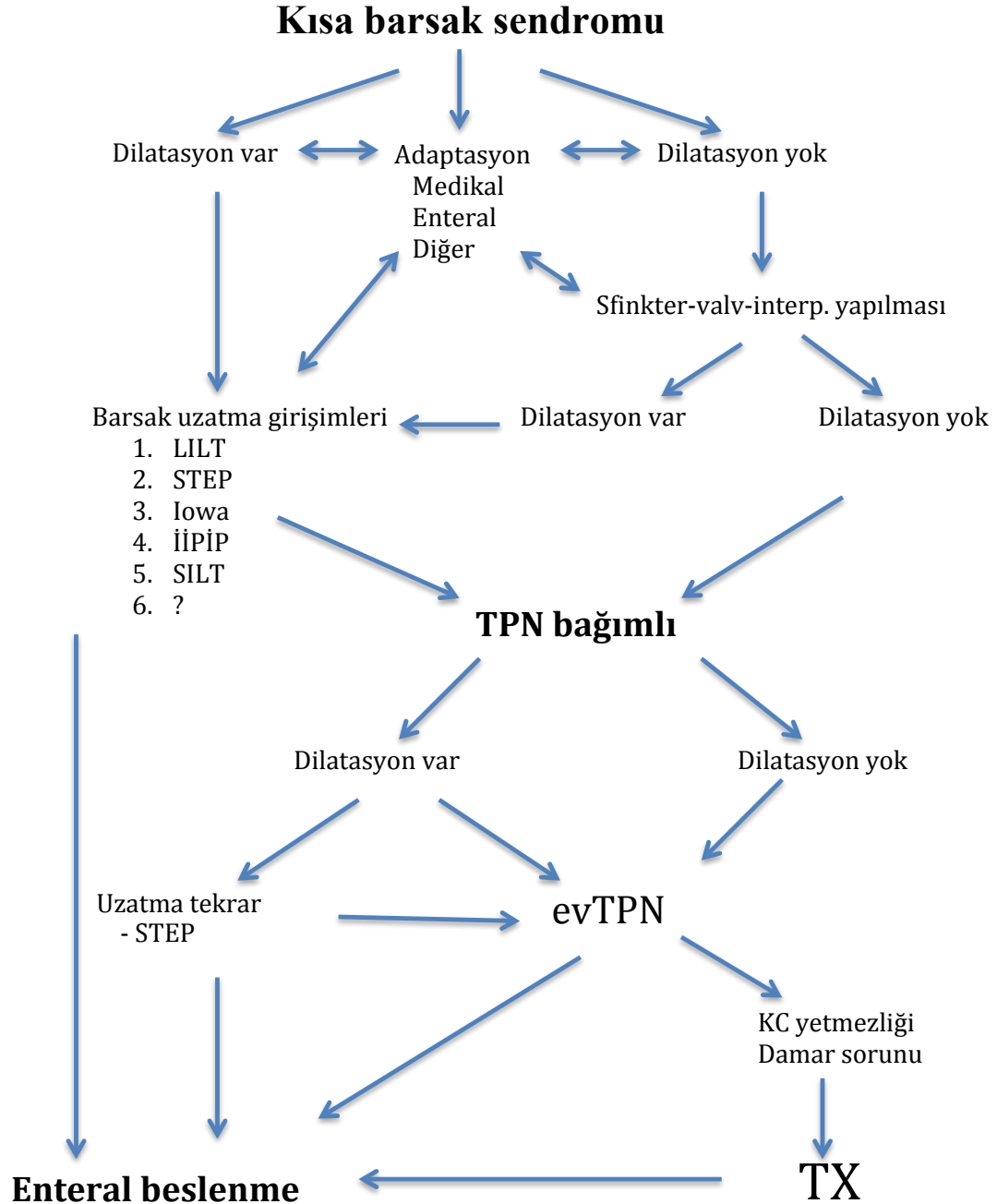


M.S.(WS Tip 4)

Postop direkt grafiler



Cerrahi yaklaşım algoritması



Sonuç

- İlk cerrahi girişimde olabildiğince barsak korunmalıdır
 - hastalığa, kişiye özel tüm değerlendirmeler yapılmalıdır
- KBS yönetimi mutidisipliner yaklaşım gerektirir
- Barsak uzunluğu, İÇV varlığı ve dilatasyon belirleyicidir
- Cerrahi seçenekler erkenden değerlendirilmelidir
 - Avantaj ve dezavantajları iyi bilinmelidir
- Cerrahi girişimlerle başarı %80-90 düzeyindedir
 - Cerrahi sorunlar yakın takip edilmelidir
- Tx kurtarma girişimi olarak tutulmalıdır



TEŞEKKÜRLER