12. ULUSAL JİNEKOLOJİ ve OBSTETRİK KONGRESİ

6. AKDENİZ ÜLKELERİ JİNEKOLOJİ ve OBSTETRİK FEDERASYONU KONGRESİ

15 - 19 MAYIS 2014

RIXOS SUNGATE OTEL, ANTALYA

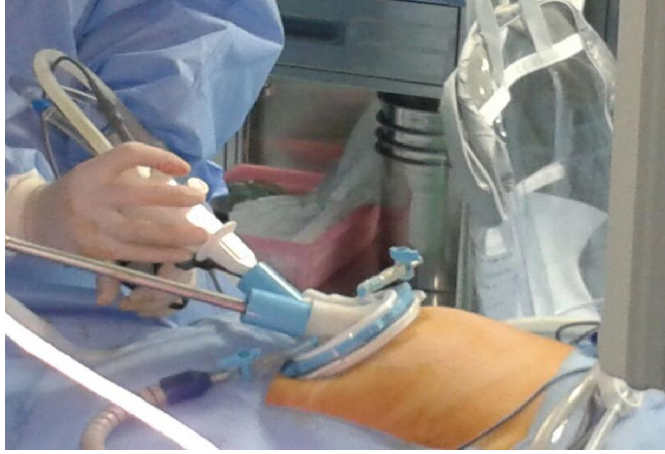
JİNEKOLOJİDE SİNGLE PORT OPERASYONLAR

Doç Dr Ahmet Kale

Kocaeli Derince Eğitim ve Araştırma Hastanesi

Kadın Hastalıkları ve Doğum Kliniği

SINGLE PORT OPERASYONLAR



- Yirmibirinci yüzyıldaki önemli gelişmelerden biri de laparoskopik cerrahideki teknolojik innovasyonlardır.

- Önemli değişikliklerden biri de göbek içinden yerleştirilen tek trokar ile laparoskopik operasyonların yapılabilmesidir.

Single Port Laparoscopic Surgery (SILS)
(Tek port Cerrahisi)

- Tek port cerrahisinde, göbek deliğinden tek bir kesi (2cm vertikal insizyon).
- Tek trokar ve multipl port
- 30 derece optik
- Kesi göbek bölgesinde
- Postoperatif hastanın karın bölgesinde görülebilen kesi izi yok

- Bu nedenle tek portla yapılan cerrahiye ´izsiz cerrahi´ de denilmektedir.

Single Port Laparoscopic Surgery (SILS)
(Tek port Cerrahisi)

- Klasik laparoskopide göbek hariç 2 - 4 delik açmak gerekir
- Tek delik cerrahisinde tüm işlemler göbekten açılan tek delik ile gerçekleştirilir
- Uygulanan cerrahi girişimin teknik detayları açısından bir fark yoktur.

Laparoscopic, minilaparoscopic and single-port hysterectomy: perioperative outcomes. Fanfani F, et al Surg Endosc - 2012; 3592-6

Single Port Laparoscopic Surgery (SILS)

- İzsiz Cerrahi
- LESS (laparoendoscopic single site surgery),
- SPA™ (Single Port Access): Tek delikten erişim cerrahisi
- SILS (single incision laparoscopic surgery) : Tek kesiden laparoskopik cerrahi
- OPUS (one port umbilical Surgery)

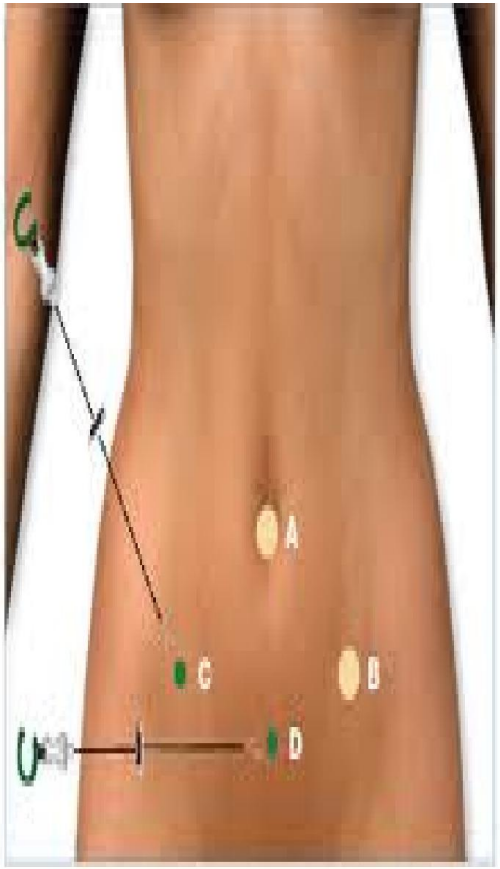
Romanelli JR, Earle DB. Single-port laparoscopic surgery: an overview. Surg Endosc 2009.

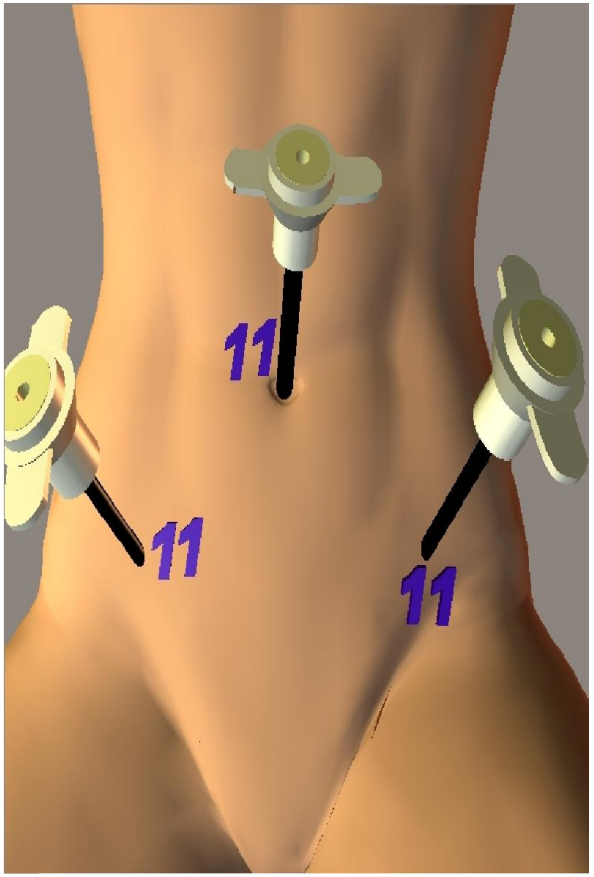
- Wheeless. Elimination of second incision in laparoscopic sterilization. *Obstet Gynecol* → 1972

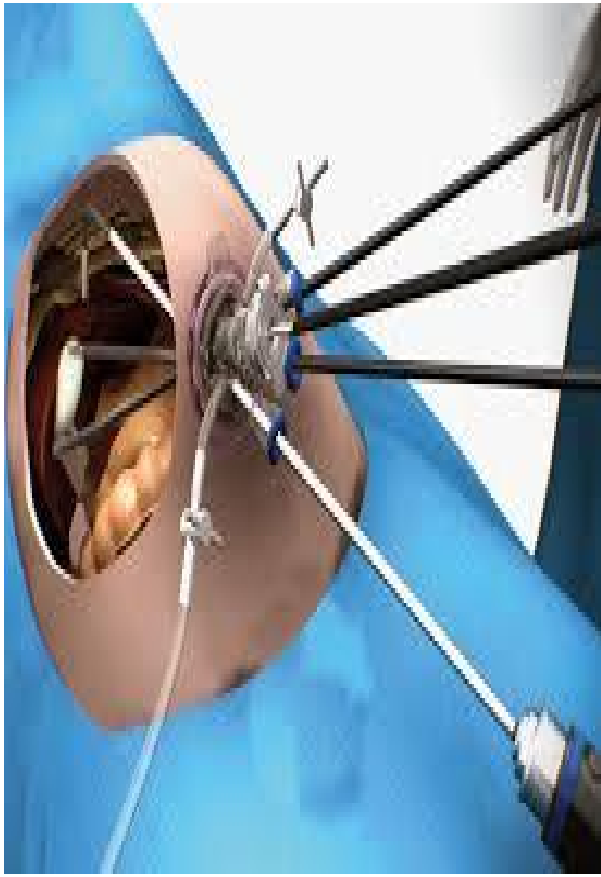
- Pelosi MA, Laparoscopic hysterectomy with bilateral salpingo-oophorectomy using a single umbilical puncture. *N J Med* → *1991*

- Podolsky and colleagues single port colesistectomy → 2007

KONVANSİYONEL L/S & SİNGLE PORT L/S

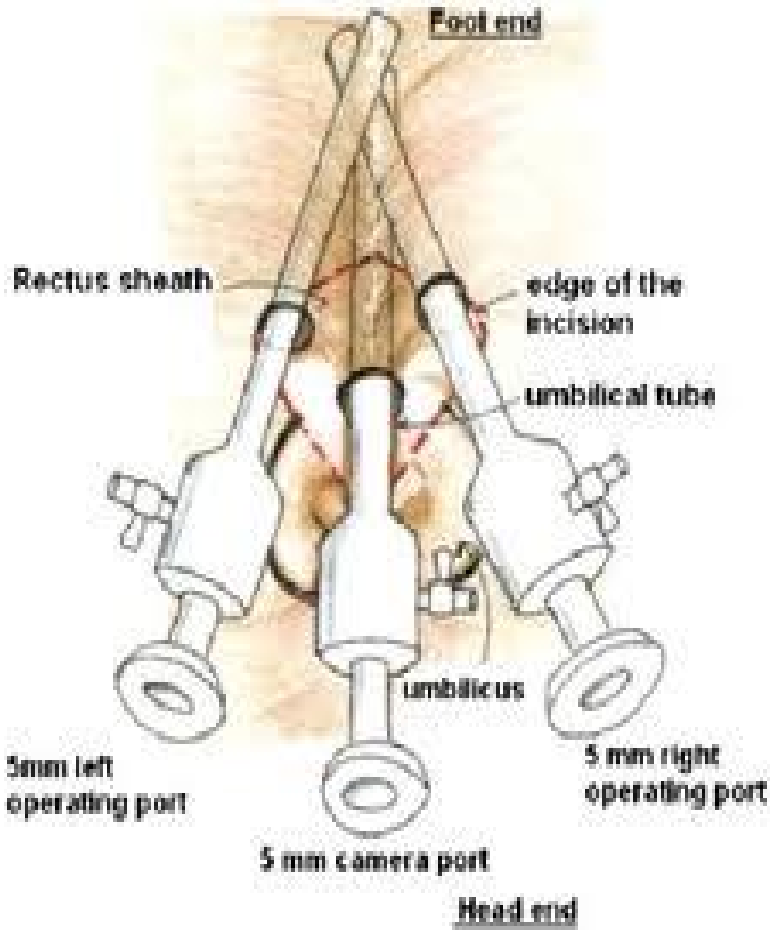




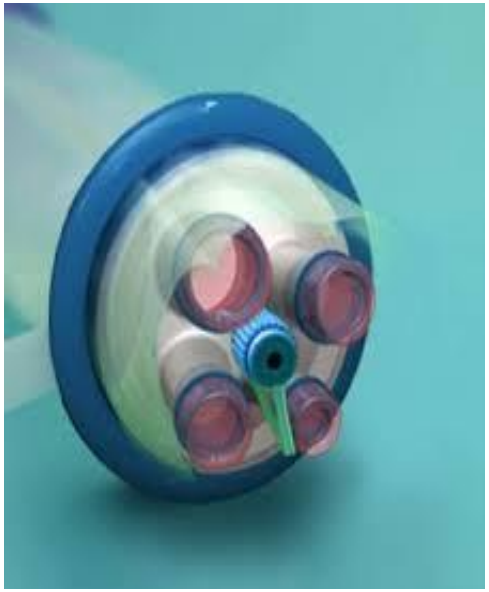


Neden umblikus ?

- Abdominal duvarda en ince bölge
- Bu bölgede daha az kan damarı, sinir ve kas mevcut
- Pelvik bölgeye panaromik görünüm imkanı


Foot end
Rectus sheath
edge of the incision
umbilical tube
umbilicus
5mm left operating port
5 mm right operating port
5 mm camera port
Head end


SILS Port
Port
Port
Port
CONMED



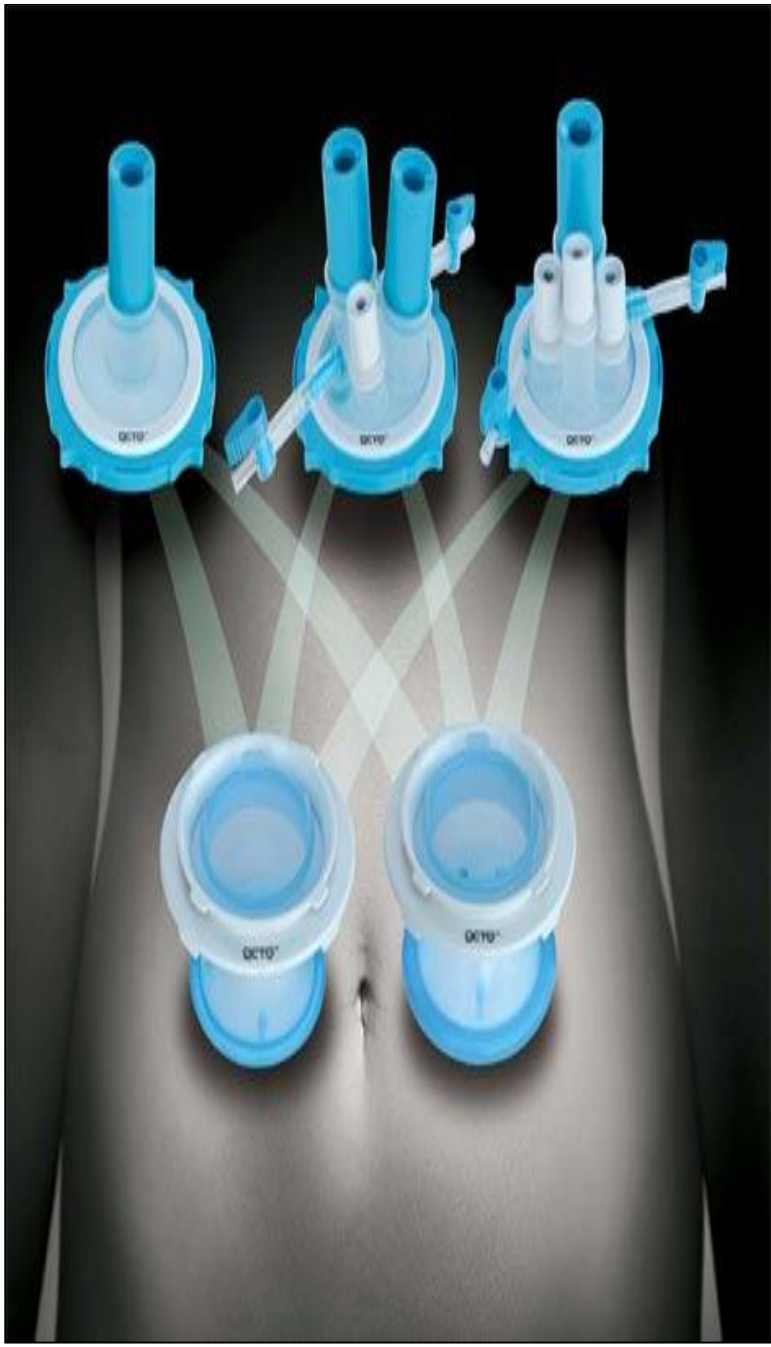
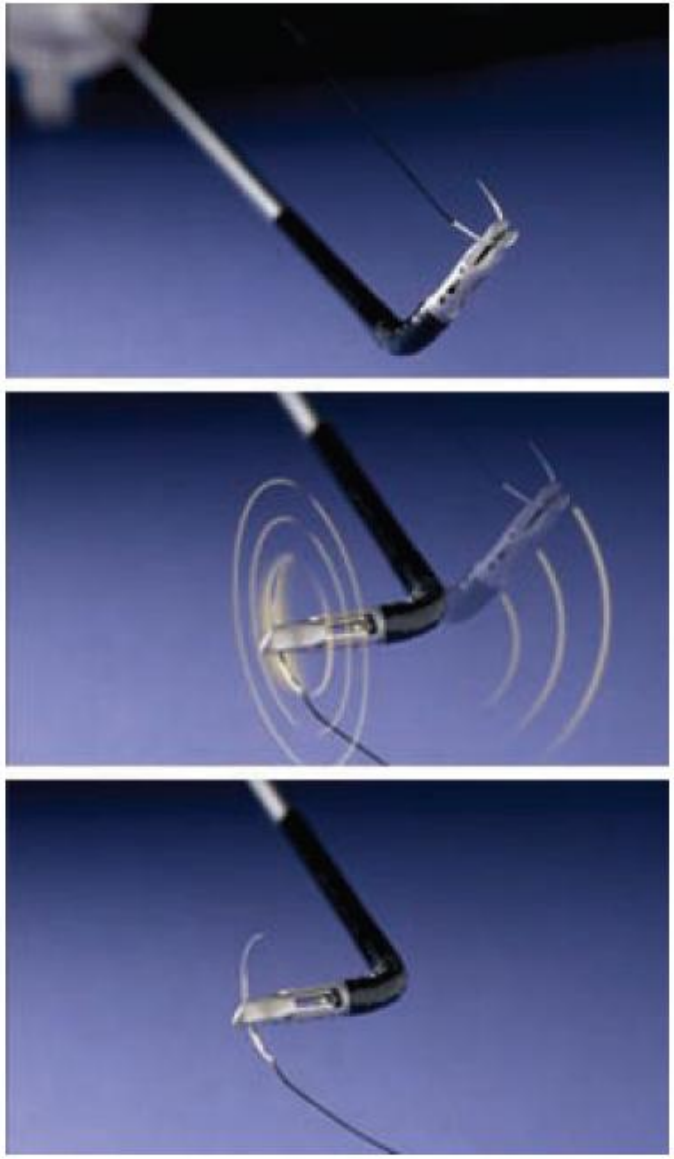
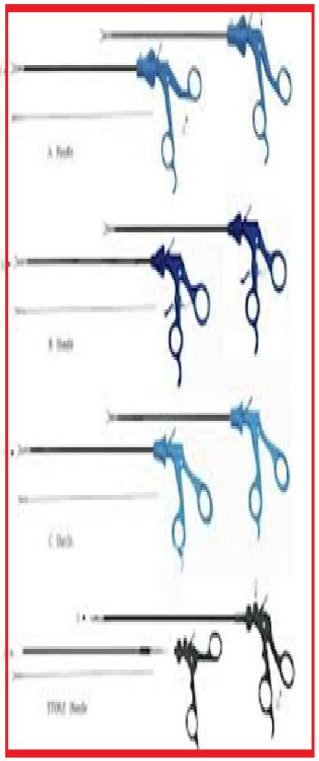


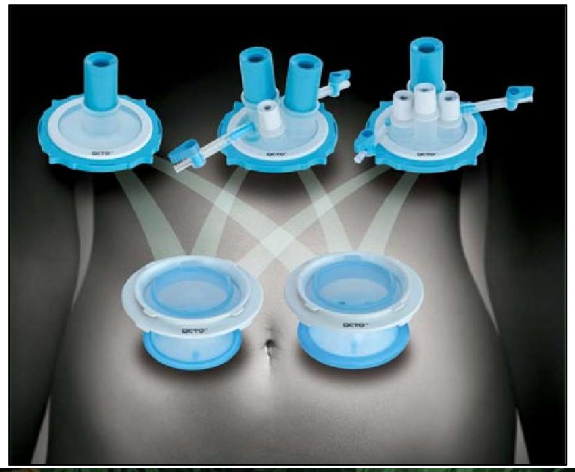
Table 1
Comparison of Single-Port Devices

Port	Multiple Standard Trocars	SILS™	TriPort™	AirSeal DFS™	GelPOINT™
Manufacturer	Multiple	Covidien	Advanced Surgical Concepts (distributed by Olympus)	SurgiQuest	Applied Medical
Lumen number (size)	2 or 3 (5 mm)	3 (1×12 mm; 2×5 mm)	3 (1×12 mm; 2×5 mm)	1 (12, 18, or 25 mm)	4 (5 mm)
Fixation mechanism	Friction	Flexible soft-foam port	Inner/outer rings	Pressure barrier	Alexis™ wound retractor
Incision	10-20 mm	15-20 mm	12-25 mm	12-25 mm	1.5-7 cm
Pros	Potentially cheaper if reusable trocars are used	Durable	Introducer available to facilitate port placement	Single opening allows combination of instrument sizes	Pseudo-abdomen platform allows increased triangulation
Cons	Bulky trocars may limit maneuverability inside and outside abdomen; may leave fascial defect difficult to close	Slightly larger fascial incision needed to accommodate port	Gel valve ports may need lubrication to allow instrument passage; air leakage through gel valves	Pressure barrier created is noisy	More expensive

AirSeal DFS, SurgiQuest, Orange, CT; GelPOINT, Applied Medical, Ranchero Santa Margarita, CA; SILS, Covidien, Mansfield, MA; TriPort, Advanced Surgical Concepts, Inc., Bray, Co. Wicklaw, Ireland. Data from MacDonald E et al.[23]







Jinekolojik Cerrahi & Single Port L/S

- Tüp ligasyonu
- Ovarian kistektomi
- Salpingo-ooforektomi
- Ektopik gebelik
- Myomektomi
- Histerektomi
- Radikal histerektomi ±pelvik paraaortik lenf nodu diseksiyonu

Laparoscopic, minilaparoscopic and single-port hysterectomy: perioperative outcomes. Fanfani F, et al Surg Endosc - 2012; 3592-6

Single-port L/S Histerektomi & Konvansiyonel L/S Histerektomi

Single port L/S Histerektomi

n=52

Konvansiyonel L/S Histerektomi

n=56

Uzun operasyon süresi

Erken mobilizasyon

Port site enfeksiyon az

Hasta tatmin düzeyi fazla

Single-port laparoscopic hysterectomy versus conventional laparoscopic hysterectomy: a prospective randomized trial.
Li M, J Int Med Res 2012

Single-port L/S Histerektomi & Konvansiyonel L/S Histerektomi

Single port L/S n=85

Operasyon süresi (105) (range, 75-125)

Postoperatif ağrı kontrolü daha iyi

Konvansiyonel L/S n=85

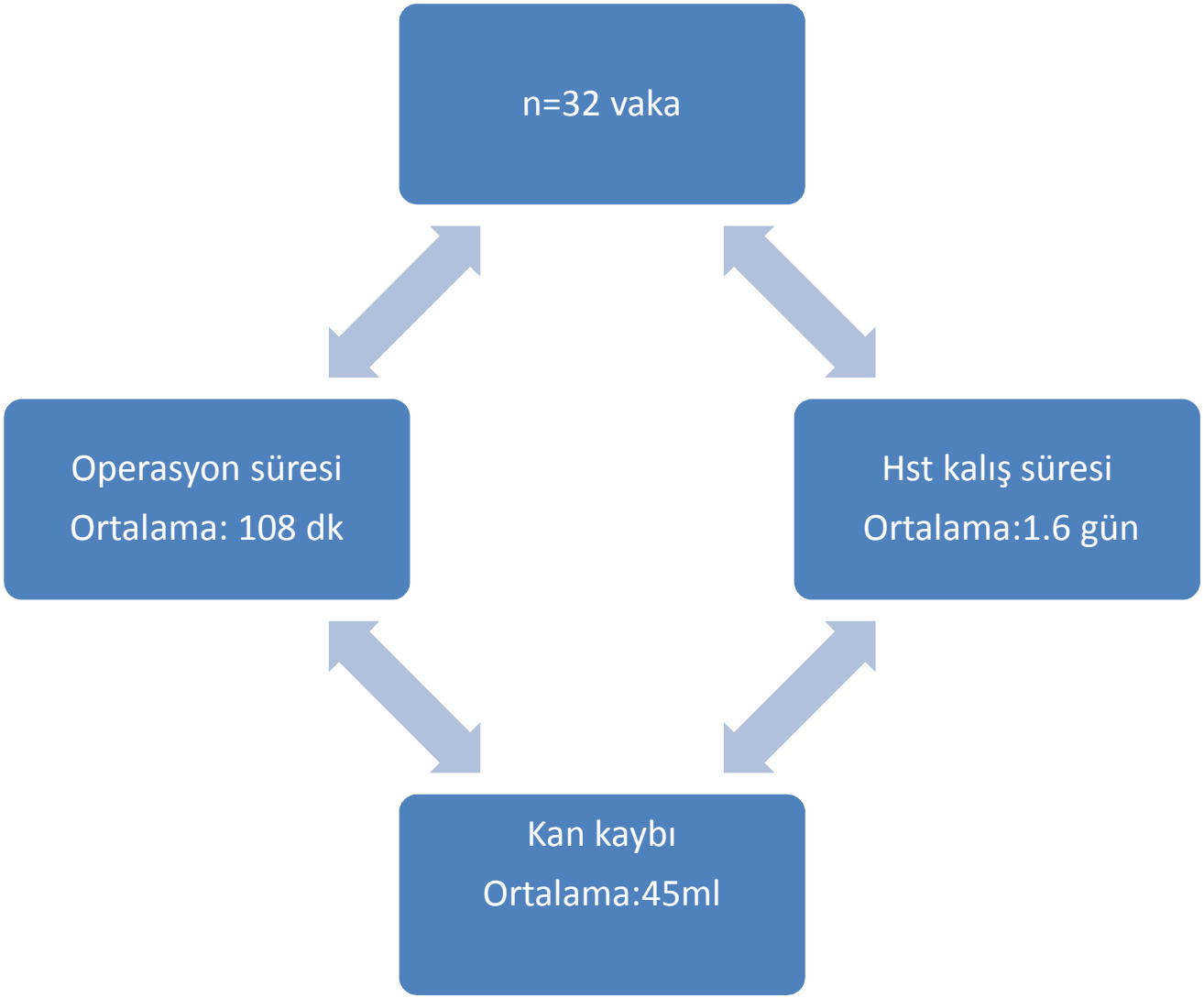
Operasyon süresi (80) (range, 50-110)

Laparoscopic, minilaparoscopic and single-port hysterectomy: perioperative outcomes.
Fanfani F, et al Surg Endosc – 2012.

Single-port compared with conventional laparoscopic hysterectomy: a randomized controlled trial. Obstet Gynecol. 2011

Single port L/S n=50	Konvansiyonel L/S n= 50
VAS skoru 3.64±2.75 Postoperative analjezik (meperidine (74.40±24.25 mg) 16±13.40 mg tenoxicam	VAS skoru 5.08±2.76 Postoperatif analjezik (meperidine 104.80±57.08 mg) 33.6±28.7 mg of tenoxicam

Transumbilical single-incision total laparoscopic hysterectomy: technique and initial experience in Turkey. Şendag F, et al . Ginekol Pol . 2012.



Single Port Histerektomi

Doç.Dr.Ahmet Kale, Op.Dr.Hasan Terzi

ELSEVIER

JMIG The Journal of Minimally Invasive Gynecology

Original Article

Laparoendoscopic Single-site Myomectomy Versus Conventional Laparoscopic Myomectomy: A Comparison of Surgical Outcomes

Seul Ki Kim, MD, Ji Hyun Lee, MD, Jung Ryeol Lee, MD, PhD*, Chang Suk Suh, MD, PhD, and Seok Hyun Kim, MD, PhD

Table 1

Patient characteristics of the LESS-M and CLM groups

	LESS-M (n = 59)	CLM (n = 59)	p value
Age (years)	41.5 ± 5.5 (30–52)	41.2 ± 5.3 (25–53)	.758
BMI (kg/m^2)	22.8 ± 2.6 (17.8–27.7)	22.4 ± 3.1 (17.9–30.6)	.545
Number of myomas	1.6 ± 0.8 (1–4)	1.4 ± 0.7 (1–5)	.149
Size of the largest myoma (cm)	7.3 ± 2.2 (2.9–14.0)	6.5 ± 2.0 (2.5–10.0)	.059
Weight of specimen (g)	173.9 ± 160.0 (12–902)	126.8 ± 97.0 (10–342)	.073
Type of the largest myoma			.276
Intramural (%)	48 (81.4)	48 (81.4)	
Subserosal (%)	7 (11.9)	8 (13.6)	
Submucosal	0	2 (3.4)	
Intraligamentary (%)	4 (6.8)	1 (1.7)	

BMI = body mass index; CLM = conventional laparoscopic myomectomy; LESS-M = laparoendoscopic single-site surgery myomectomy.

Data are shown as mean ± standard deviation (range) or number (%).

ELSEVIER

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Table 2

Comparison of surgical outcomes between the LESS-M and CLM groups

	LESS-M (n = 59)	CLM (n = 59)	p value
Operative time (min)	115.7 ± 45.8 (56–282)	128.2 ± 35.7 (65–207)	.102
Estimated blood loss (mL)	171.0 ± 155.8 (20–800)	217.3 ± 188.8 (30–500)	.155
Postoperative Hb drop (g/dL)	1.8 ± 1.4 (−0.2 to 7.6)	1.8 ± 1.1 (−0.8 to 5.9)	.973
Postoperative hospital stay (d)	2.1 ± 0.4 (1–5)	2.1 ± 0.6 (1–5)	.489
No. of intraoperative complications	0	0	
No. of postoperative complications (%)	2 (3.4)	1 (1.7)	.559
NRS postoperative, 1 hour	5.7 ± 1.4 (3–9)	6.0 ± 1.6 (2–10)	.325
NRS postoperative, 6 hours	4.6 ± 1.1 (2–7)	4.3 ± 1.6 (3–10)	.235
NRS postoperative, 24 hours	3.5 ± 0.8 (2–6)	3.4 ± 1.2 (2–7)	.621

CLM = conventional laparoscopic myomectomy; Hb = hemoglobin; LESS-M = laparoendoscopic single-site surgery myomectomy; NRS = numeric rating scale.

Data are shown as mean ± standard deviation (range) or number (%).

- **Video 2**

Kaohsiung Journal of Medical Sciences (2011) 27, 91—95

available at www.sciencedirect.com

ScienceDirect

journal homepage: http://www.kjms-online.com

ORIGINAL ARTICLE

Laparoendoscopic single-site surgery versus conventional laparoscopic surgery for adnexal tumors: A comparison of surgical outcomes and postoperative pain outcomes

Characteristics	LESS (n = 18)	CLS (n = 15)	p
Age (yr)	38.4 (21.1—67.4)	37.9 (26.7—60.2)	0.971
Nulliparity	7 (38.9)	7 (46.7)	0.640
Body mass index (kg/m^2)	23.7 (20—44.6)	22.9 (19.4—29.6)	0.772
History of abdominal surgery	6 (33.3)	6 (40)	0.602
Laparoscopic surgery	2 (11.1)	0	
Laparotomy	4 (22.2)	6 (40)	

Table 2 Surgical and pathological comparisons between LESS and CLS

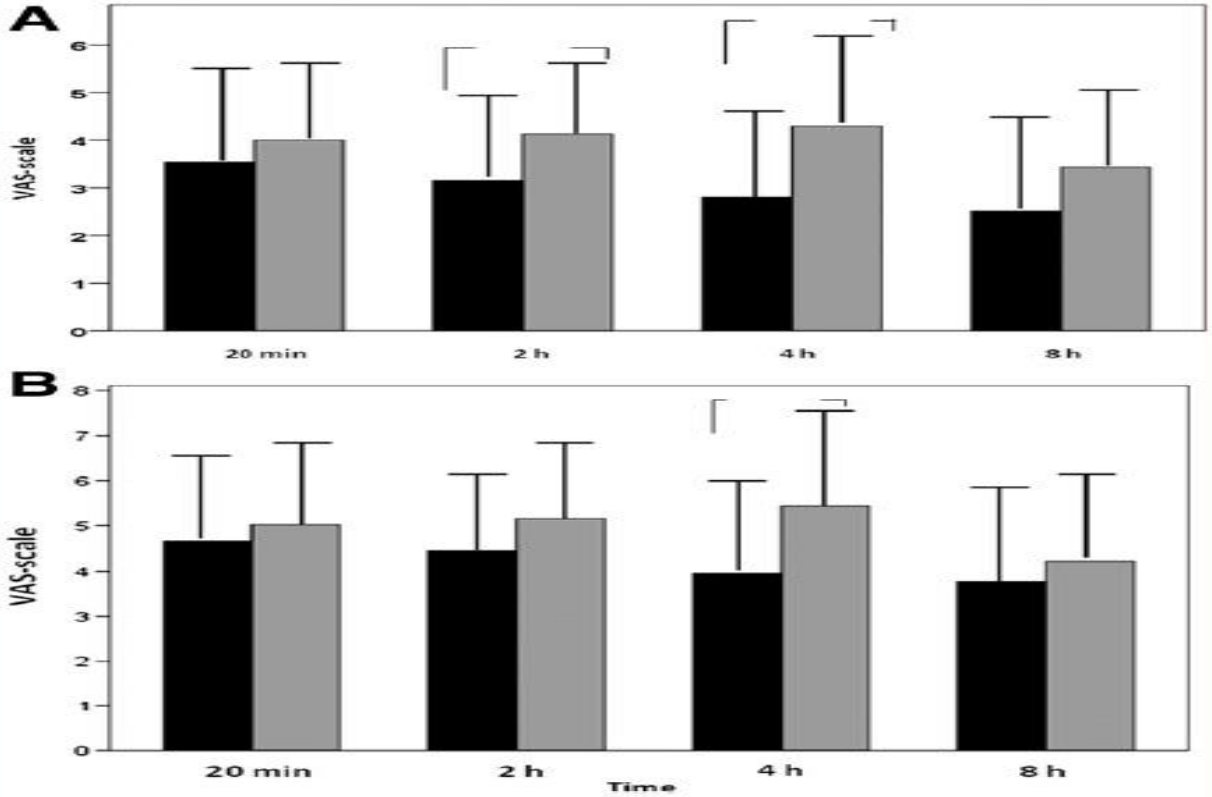
Surgical and pathological findings	LESS (n = 18)	CLS (n = 15)	p
Maximal diameter of tumor (mm)	83 (10–200)	64 (20–120)	0.445
Bilaterality of tumor	2 (11.1)	3 (20)	0.478
1 hr later	5.11	3.72	0.109
6 hr later	3.88	3.47	0.554
12 hr later	3.27	3.40	0.868
24 hr later	2.39	1.94	0.375
48 hr later	1.02	0.68	0.134
Need for analgesic within 48 hr	5 (27.8)	4 (26.7)	0.845

Postoperative pain after conventional laparoscopy and laparoendoscopic single site surgery (LESS) for benign adnexal disease: a randomized trial

Anna Fagotti, M.D., Ph.D.,[a] Carolina Bottoni, M.D.,[a] Giuseppe Vizzielli, M.D.,[a] Salvatore Gueli Alletti, M.D.,[a] Giovanni Scambia, M.D.,[a] Elisabetta Marana, M.D.,[b] and Francesco Fanfani, M.D.[a]

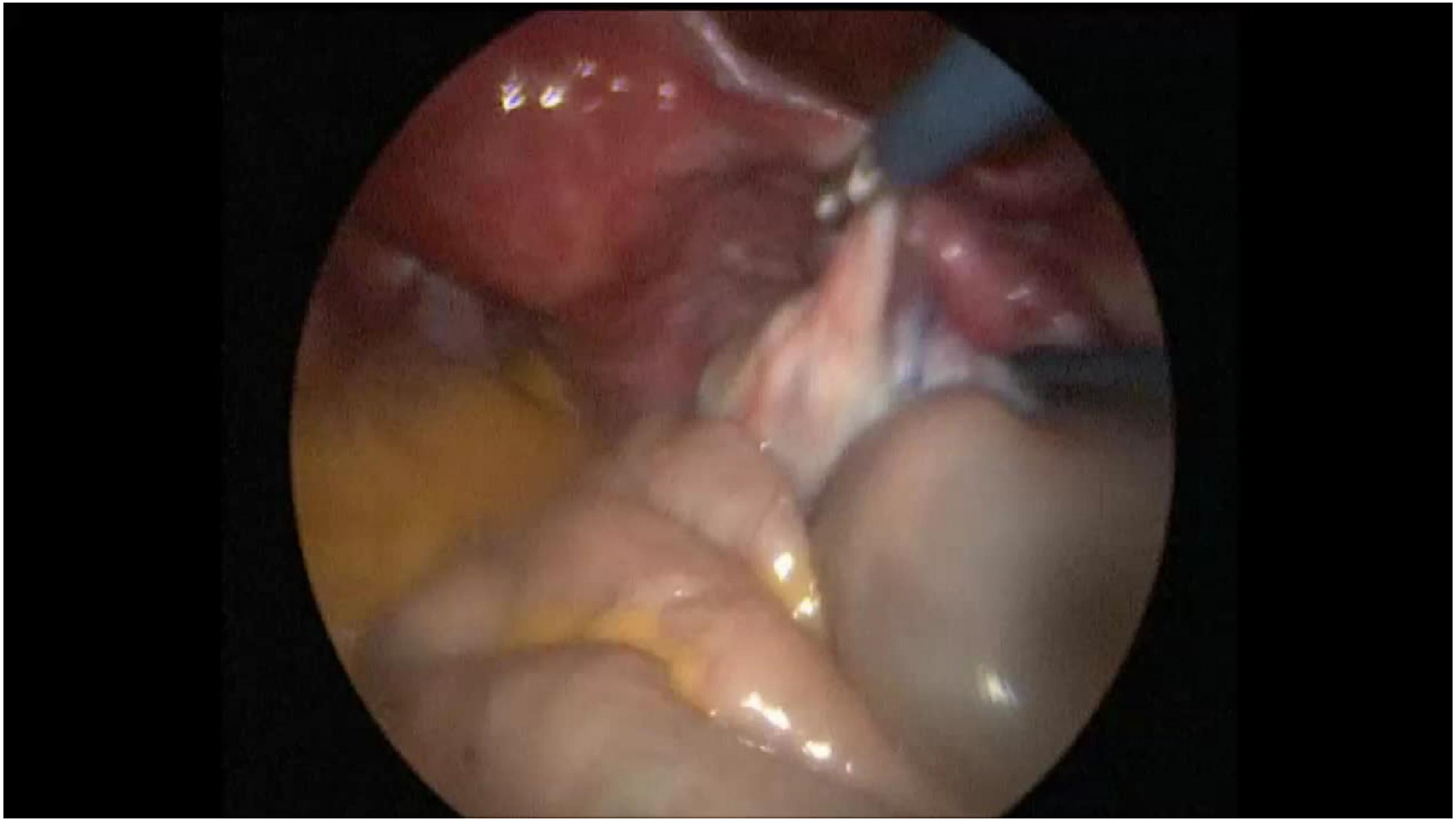
FIGURE 2

Pain assessment by visual analog scale (VAS): (**A**) at rest ($P = .02$ at 2 hours; $P = .004$ at 4 hours); (**B**) after Valsalva maneuver ($P = .01$ at 4 hours). Black bars = laparoendoscopic single-site surgery; gray bars = conventional laparoscopy.



Fagotti. Postoperative pain after LESS. Fertil Steril 2011.

Single Port Ovarian Kistektomi



European Journal of Obstetrics & Gynecology and Reproductive Biology 167 (2013) 215–218

Contents lists available at SciVerse ScienceDirect

European Journal of Obstetrics & Gynecology and Reproductive Biology

journal homepage: www.elsevier.com/locate/ejogrb

Laparoendoscopic single site (LESS) surgery in benign gynecology: perioperative and late complications of 515 cases

Jin-Young Park [1], Tae-Joong Kim [1], Hyo-Jeong Kang, Yoo-young Lee, Chel Hun Choi, Jeong-Won Lee, Duk-Soo Bae, Byoung-Gie Kim *

Department of Obstetrics & Gynecology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Republic of Korea

Table 1
Perioperative outcomes.

	LAVH	TLH	SH	Adn	C	M	Others
Cases No. (%)	192(37.3)	82(16.0)	26(5.0)	87(16.9)	100(19.4)	17(3.3)	11(2.1)
Op time (min) (range)	110 (54–310)	87.5 (46–255)	143 (50–345)	57.5 (18–206)	90 (23–206)	113 (29–227)	86 (15–245)
EBL (ml) (range)	400 (50–2400)	200 (30–1500)	275 (50–600)	50 (0–400)	50 (0–750)	100 (10–300)	50 (0–400)
Complications							
Intraop	4	1	0	0	0	0	0
Postop	3	3	0	0	0	0	0
Transfusion	28	5	3	0	0	0	0
Additional port	5	0	0	3	12	0	0
Conversion to laparotomy	1	0	0	1	0	0	0
Median PHS (day)(range)	3.0 (1–7)	3.0 (2–5)	3.0 (2–7)	2.0 (1–14)	2.0 (1–5)	2.0 (1–3)	3 (1–5)

LAVH, laparoscopic assisted vaginal hysterectomy; TLH, total laparoscopic hysterectomy; SH, subtotal hysterectomy; Adn, adnexectomy; C, cystectomy; M, myomectomy; others, 4 cases of adhesiolysis, 2 cases of appendectomy, 1 case of omental biopsy, peritoneal biopsy, salpingeal biopsy, diagnostic laparoscopy, fixed Jackson-Pratt drain removal; PHS, postoperative hospital stay.

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Department of Obstetrics & Gynecology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Republic of Korea

Geç komplikasyon oranı (0.6%)

Table 3
Late complications.

	Cases, No.	Procedure	C-D classification	Comment
Umbilical hernia	2	TLH LAVH	IIIb	1 case; found 8 months postop and repaired without mesh 1 case; found 6 months postop, did not require therapy
Vault evisceration	1	TLH	IIIb	Occurred on postop day 68 after coitus and required emergent vault repair via vaginal approach

C-D classification, Clavien-Dindo classification.

LEARNING CURVE

Table 3 Laparoendoscopic single-site surgery operative times for total hysterectomy/bilateral salpingo-oophorectomy cases ($N=31$)

Operative times in minutes (SD)	Quartile 1, cases 1–10	Quartile 2, cases 11–20	Quartile 3, cases 21–31	*P*
Mean incision/port insertion time[a]	9.2 (1.99)	4.8 (1.23)	4.3 (1.42)	<0.0001
Mean total case time[b]	79.4 (18.2)	56.8 (12.5)	52.0 (6.3)	0.0002

[a]Time from initial skin incision until single-port device is inserted (min).
[b]Defined as time from initial skin incision to skin closure (min).

Single-port laparoscopic surgery is applicable to most gynecologic surgery: a single surgeon's experience.

Lee et al . Surg Endosc - 2012

SİNGLE PORT DENEYİM

n=500 vaka

Histerektomi (n = 239)

Adneksektomi (n= 212)

Myomektomi (n = 51)

İlk 100 vaka → %29

100-200 vaka→ %62

200-300 vaka→ %72

300-400 vaka→ %71

400-500 vaka→ %86

Kocaeli Derince Eğitim ve Araştırma Hastanesi

- Kasım 2011 – Nisan 2014
- Toplam 317 vaka → 257 Konvansiyonel TLH

  → 35 Single port TLH

  → 25 Laparoskopik radikal histerektomi

HASTANEMİZ KADIN DOĞUM KLİNİĞİNDEN TÜRKİYE'DE BİR İLK

Laparoscopic single port nerve sparing radical hysterectomy

Single port dezavantaj

- Artmış maliyet ???
- Kısıtlı alanda çalışma zorluğu

Laparoscopic, minilaparoscopic and single-port hysterectomy: perioperative outcomes.
Fanfani F, et al Surg Endosc - 2012

Tek port cerrahisinin avantajları

- Kozmetik sonuçlar mükemmeldir.
- Göbek çukuru içinde fark edilmesi bile zor düzeyde küçük bir iz kalabilmektedir.
- Postoperatif erken taburcu
- Daha az postoperatif ağrı
- Daha az port site enfeksiyonu
- Ek trokar yerleştirilmesi sırasında görülebilen organ ve damar yaralanma riski daha azdır.

Fader AN, Escobar PF. Laparoendoscopic singlesite surgery (LESS) in gynecologic oncology: technique and initial report. *Gynecol Oncol.* 2009;114:157-161.

Son sözler

- Jinekolojik operasyonlarda tek port laparoskopik cerrahi konvansiyonel laparoskopiye alternatif bir metoddur.

- Uzun dönemde tek port laparoskopik cerrahi konvansiyonel laparoskopinin yerini alacak gibi durmaktadır.

TEŞEKKÜRLER

- ‘’Azim 19 kez kaybedip 20'nci de başarıya ulaşmaktır." Julie Andrews

- "İlerlemenin sırrı başlamada gizlidir." Sally Berger