



Clinical Results of Endovascular Repair of Ruptured Abdominal Aortic Aneurysms

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BACKGROUND

- ✓ Ruptured infrarenal abdominal aortic aneurysms (rAAAs) continue to be a challenge for vascular surgeons in the emergency setting.



BACKGROUND

- ✓ The introduction of endovascular therapy in the treatment of rAAAs remains a controversial subject.
- ✓ A debate exists about the definitive benefit of endovascular repair of rAAAs compared with open surgery.



OBJECTIVE

- ✓ The aim of this study was to evaluate our experience with endovascular repair of rAAAs.

METHOD

1.2012~2.2017

Number of patients(EVAR)

All

289

Elective

264 (91%)

Emergency

25 (9%)

Male/female

16/9

Age (years)

76.4(52-88)

Associated pathologies

Hypertension

25 (100%)

Dyslipidemia

17 (68%)

COPD

6 (24%)

Ischemic heart disease

4 (16%)

Diabetes mellitus

2 (8%)

Chronic kidney disease

7 (28%)

Cerebrovascular disease

5 (20%)

Patients' Characteristics

N=25

Clinical condition before the Procedures

Unstable hemodynamics (BP<70)	6 (24%)
Anemia (hemoglobin <8)	6 (24%)
Blood transfusion	7 (28%)
Inotropic support	5 (20%)
Preoperative intubation	4 (16%)

Fitzgerald classification

type I	4 (16%)
type II	14 (56%)
type III	6 (24%)
type IV	1 (4%)

Patient's Characteristics

Anatomical findings

Proximal neck

Diameter (mm)

23.0 ± 3.8 (18-32)

Length (mm)

22.5 ± 17.8 (6-90)

<15mm

12/25

Maximum aneurysmal diameter (mm)

71.4 ± 11.4 (45-100)

Distal neck

Right iliac

Diameter (mm)

15.0 ± 3.1

Length (mm)

27.8 ± 7.8

Left iliac

Diameter (mm)

13.6 ± 4.6

Length (mm)

26.6 ± 11.2

Iliac artery aneurysm

2 (8%)

RESULTS

Duration of procedure(min.)	112 ± 54(46-250)
Anesthesia	
General	24 (96%)
Local	1 (4%)
Configuration of endograft	
Bifurcated	25 (100%)
AUI	0 (0%)
Device	
ENDURANT	24 (96%)
EXCLUDER	1 (4%)
Blood transfusion	22 (88%)
Balloon occlusion	2 (8%)

RESULTS

Technical outcome	
Technical success	96% (24/25)
Endoleak(angiography)	
Type I	1 (4%)
Type II	0 (0%)
Type III	0 (0%)
Type IV	6 (24%)
Concomitant procedure	
Coil embolism	3 (12%)
Conversion to open surgery	0 (0%)
Secondary surgical procedure	
Endovascular repair	0 (0%)
Laparotomy for ACS	2 (8%)

RESULTS

Hospital mortality	2/25(8%)
Cause of death	
Pneumonia	1 (4%)
ACS	1 (4%)
Morbidity	
Prolonged ventilation (>48hr)	7 (28%)
Required dialysis	1 (4%)
ACS	2 (8%)
Hospital stay (day)	19.0±12.7

RESULTS

Postoperative CT findings

Enhanced CT

23/25

No evidence of endoleak

22/23

Type I

1

Type II

0

Type III

0

Diameter of aneurysmal sac (mm)

66.9 ± 13.1

No. of cases of aneurysmal shrinkage

13

SUMMARY

- ✓ The rate of hospital mortality was 8%.
 - ✓ Many cases required a long duration of ventilator management owing to respiratory function disorder after the endovascular repair.
 - ✓ No case required secondary endovascular repair in our series.
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CONCLUSION

- ✓ The clinical results of endovascular repair of rAAAs at our center are satisfactory.
- ✓ Endovascular repair is a less invasive and safer treatment for rAAAs than open surgery.



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