Management of

ATBAD with Retrograde Aortic Dissection

Less proximal coverage *should be considered*

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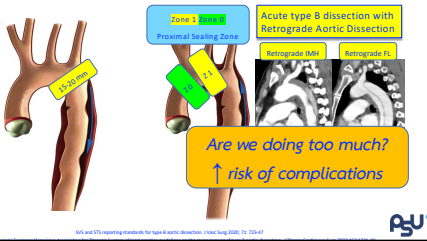
Disclosure

- None

"Adequate Length of Healthy Proximal Landing zone

IMH, FL free zone, 15-20 mm in length



SVS and STS reporting standards for type B aortic dissection. J Vasc Surg 2020; 71: 723-47

TEVAR as ATBAD covering the entry tear *in Zone 2, 3*

in the presence of retrograde Dissection (IMH/FL)

May be enough?

Evidences from literature

PSU experience

ATBAD *in the presence of retrograde dissection (IMH/FL)*

TEVAR *in Zone 2, 3*

Impact of Retrograde Arch Extension in Acute Type B Aortic Dissection on Management and Outcomes

International Registry of Acute Aortic Dissection (IRAD) Investigators

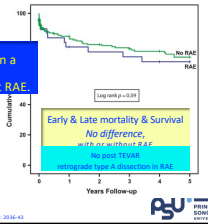
Acute type B dissection with RAE might be treated in a similar fashion to those with type B dissection without RAE.

January 1, 1996 - November 1, 2014

1981 ATBAD enrolled

404 entry tear distal to LSA and extension confined in aortic arc

16.5% (67 cases) with Retrograde Arch Extension (RAE)



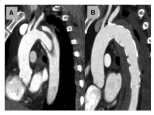
Fanke FJHA, et al. Ann Thorac Surg 2016; 102: 2036-43

ATBAD *in the presence of retrograde dissection (IMH/FL)*

TEVAR *in Zone 2, 3*

Intramural hematoma in the proximal sealing zone of the thoracic endovascular aneurysm repair: frequency and safety in acute and subacute type B dissections

Mario Lescan*, Migdat Mustafi, Julia Hahn, Christian Schlensak and Mateja Andic



2016-2023: 84 ACTBAD patients, median Age 63 (55-72)

(IMH:42, no-IMH:42)

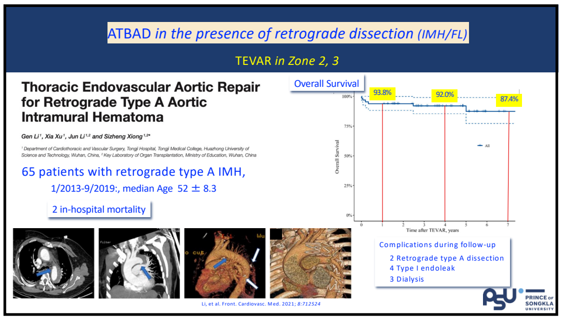
Hyperacute 23 (27%) , Acute 34 (40%) , Subacute 27 (32%)

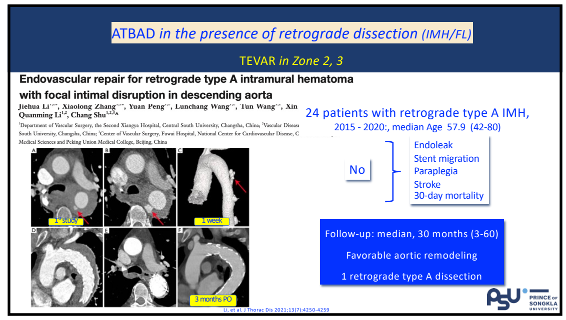
Presence of IMH in Proximal TEVAR sealing zone

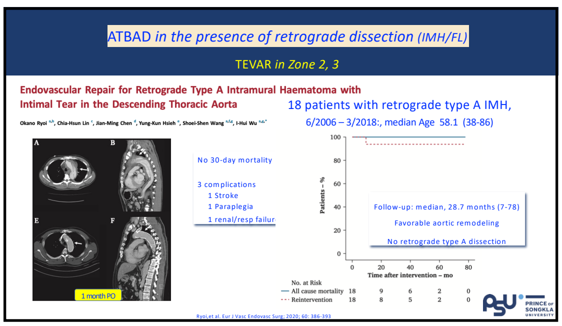
Not relevant to the occurrence of

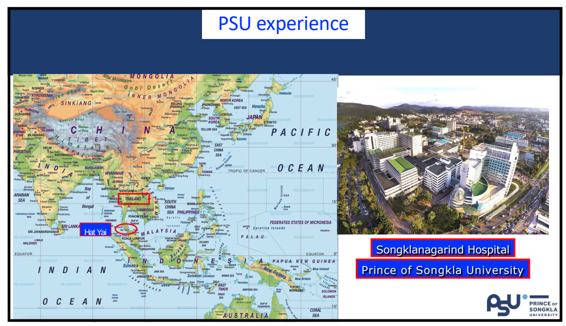
RTAD, stent-graft migration, bird-beak formation

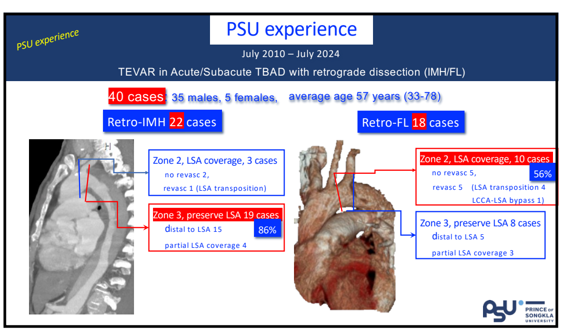
Lescan, et al. Front. Cardiovasc. Med. 2023; 10:1270830.

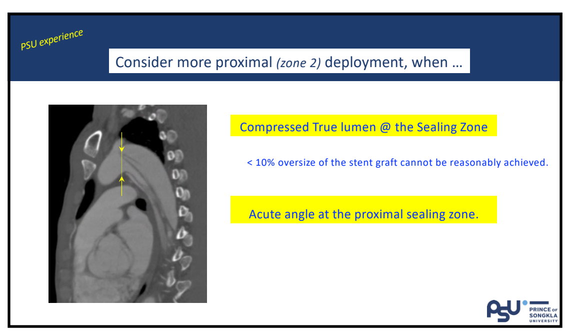

ATBAD in the presence of retrograde dissection (IMH/FL)
TEVAR in Zone 2, 3
Thoracic Endovascular Aortic Repair for Retrograde Type A Aortic Intramural Hematoma
Overall Survival
93.8%
92.0%
87.4%
65 patients with retrograde type A IMH,
1/2013-9/2019:, median Age 52 ± 8.3
2 in-hospital mortality
Complications during follow-up
2 Retrograde type A dissection
4 Type I endoleak
3 Dialysis

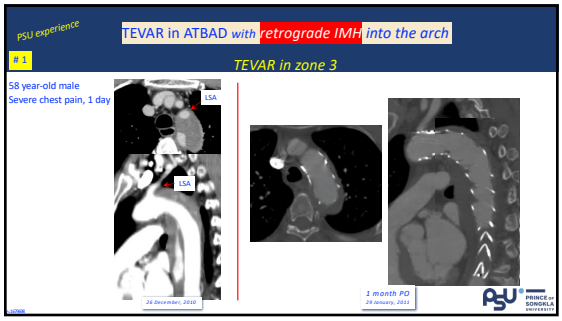

ATBAD in the presence of retrograde dissection (IMH/FL)
TEVAR in Zone 2, 3
Endovascular repair for retrograde type A intramural hematoma with focal intimal disruption in descending aorta
24 patients with retrograde type A IMH,
2015 - 2020:, median Age 57.9 (42-80)
No
Endoleak
Stent migration
Paraplegia
Stroke
30-day mortality
1 week
3 months PO
Follow-up: median, 30 months (3-60)
Favorable aortic remodeling
1 retrograde type A dissection

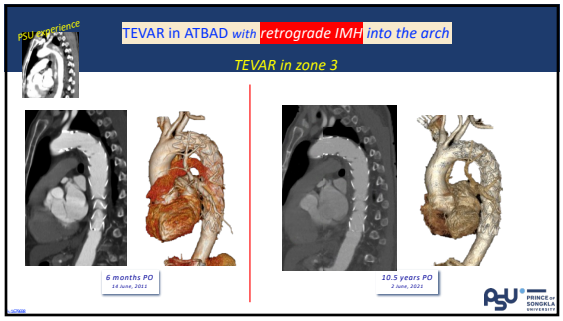

ATBAD in the presence of retrograde dissection (IMH/FL)
TEVAR in Zone 2, 3
Endovascular Repair for Retrograde Type A Intramural Haematoma with Intimal Tear in the Descending Thoracic Aorta
18 patients with retrograde type A IMH,
6/2006 – 3/2018:, median Age 58.1 (38-86)
No 30-day mortality
3 complications
1 Stroke
1 Paraplegia
1 renal/resp failur
Follow-up: median, 28.7 months (7-78)
Favorable aortic remodeling
No retrograde type A dissection
Time after intervention – mo
1 month PO

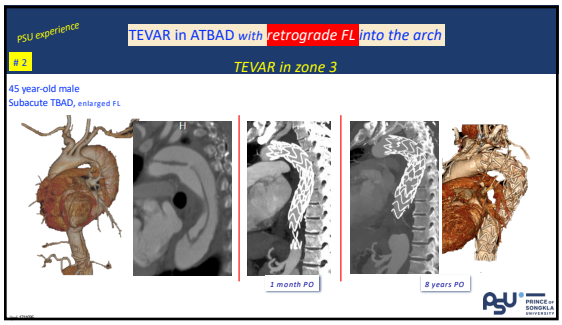

PSU experience
PACIFIC
OCEAN
INDIAN
OCEAN
Hat Yai
Songklanagarind Hospital
Prince of Songkla University

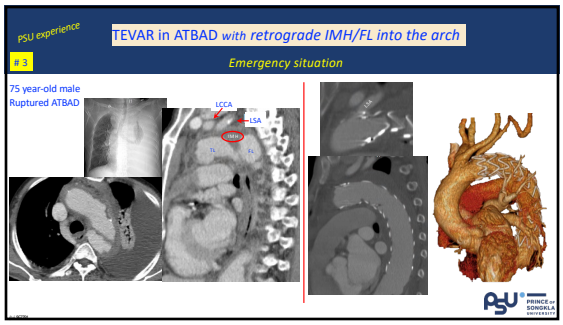

PSU experience
PSU experience
July 2010 – July 2024
TEVAR in Acute/Subacute TBAD with retrograde dissection (IMH/FL)
40 cases 35 males, 5 females, average age 57 years (33-78)
Retro-IMH 22 cases
Retro-FL 18 cases
Zone 2, LSA coverage, 3 cases
no revasc 2,
revasc 1 (LSA transposition)
Zone 3, preserve LSA 19 cases
distal to LSA 15
86%
partial LSA coverage 4
Zone 2, LSA coverage, 10 cases
no revasc 5,
56%
revasc 5 (LSA transposition 4
LCCA-LSA bypass 1)
Zone 3, preserve LSA 8 cases
distal to LSA 5
partial LSA coverage 3

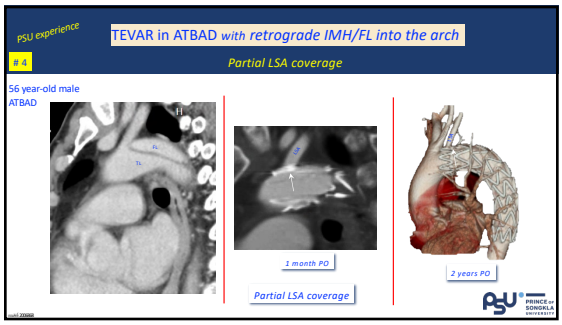

PSU experience
Consider more proximal (zone 2) deployment, when …
Compressed True lumen @ the Sealing Zone
< 10% oversize of the stent graft cannot be reasonably achieved.
Acute angle at the proximal sealing zone.

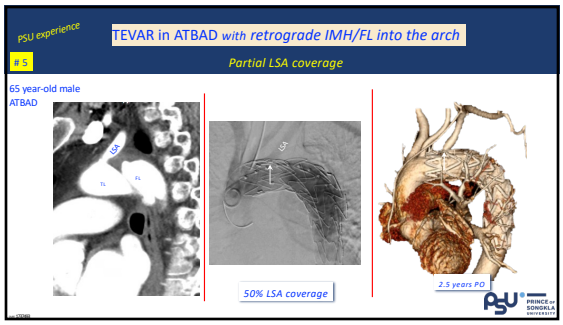

PSU experience
TEVAR in ATBAD with retrograde IMH into the arch
1
TEVAR in zone 3
58 year-old male
Severe chest pain, 1 day
LSA
LSA
24 December, 2010
1 month PO
29 January, 2011


PSU experience
TEVAR in ATBAD with retrograde IMH into the arch
TEVAR in zone 3
6 months PO
14 June, 2011
10.5 years PO
2 June, 2021


PSU experience
TEVAR in ATBAD with retrograde FL into the arch
2
TEVAR in zone 3
45 year-old male
Subacute TBAD, enlarged FL
1 month PO
8 years PO


PSU experience
TEVAR in ATBAD with retrograde IMH/FL into the arch
3
Emergency situation
75 year-old male
Ruptured ATBAD
LCCA
LSA


PSU experience
TEVAR in ATBAD with retrograde IMH/FL into the arch
4
Partial LSA coverage
56 year-old male
ATBAD
1 month PO
2 years PO
Partial LSA coverage


PSU experience
TEVAR in ATBAD with retrograde IMH/FL into the arch
5
Partial LSA coverage
65 year-old male
ATBAD
50% LSA coverage
2.5 years PO

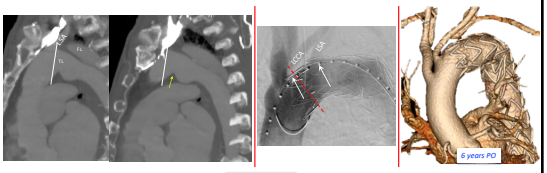
PSU experience

TEVAR in ATBAD *with retrograde IMH/FL into the arch*

6

LSA coverage, without revascularization

56 year-old male
ATBAD



LSA coverage

PSU experience

TEVAR in ATBAD *with retrograde IMH/FL into the arch*

7

LSA coverage, with revascularization

61 year-old female
ATBAD

LSA transposition

PSU experience

July 2010 – July 2024

40 cases TEVAR in Acute/Subacute TBAD with retrograde IMH/FL

Preserve LSA 27 cases
distal to LSA 20
partial coverage 7

LSA coverage 13 cases
without revascularization 7
LSA revascularization 6

0 stroke

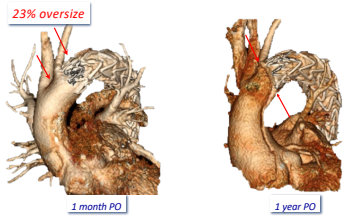
1 in-hospital MR: PO paraplegia, MOF

2 Retrograde type A dissection

Follow-up: median, 32 months (1-164)
Favorable aortic remodeling

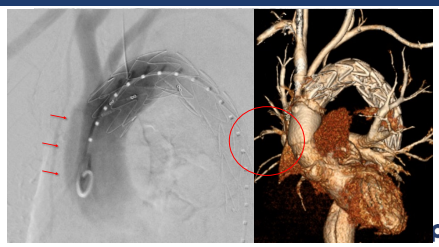
Complication #1

Retrograde type A dissection: Too much oversize



Complication #2

Retrograde type A dissection: Wire malposition



CONCLUSIONS

Zone 3 / Zone 2 TEVAR is adequate
for Acute / Subacute TBAD with retrograde IMH / FL dissection

Careful device selection and procedural technique are critical for good outcomes


Thank you