

Transseptal Geçiřte Pratik İpuçları

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Yöntemler

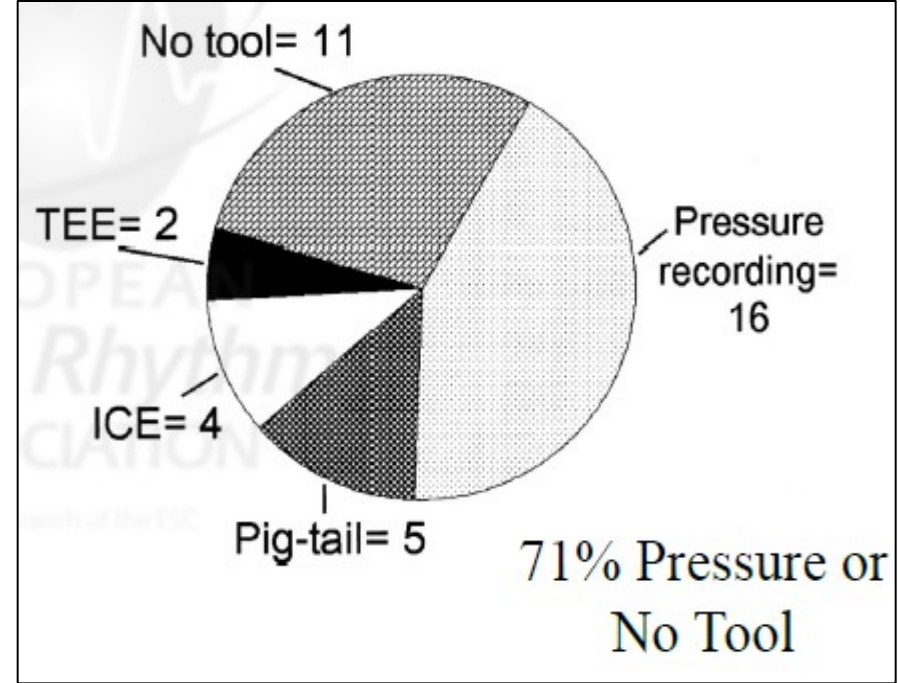
Geleneksel yöntem (EP)→

- CS/His/RV
- Wire
- Kontrast
- Basınç

TEE

ICE

Özel iğneler-RF vs.

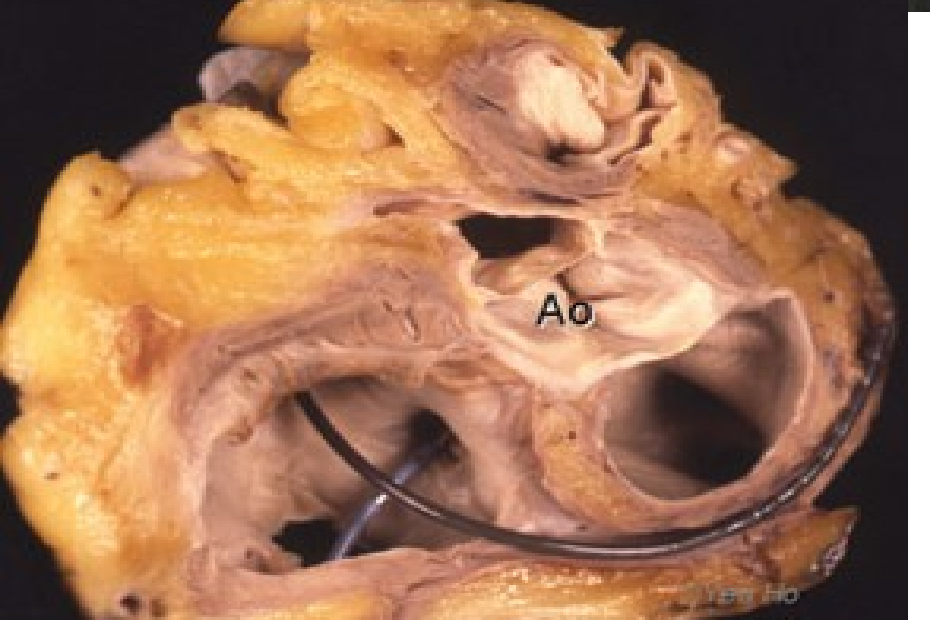
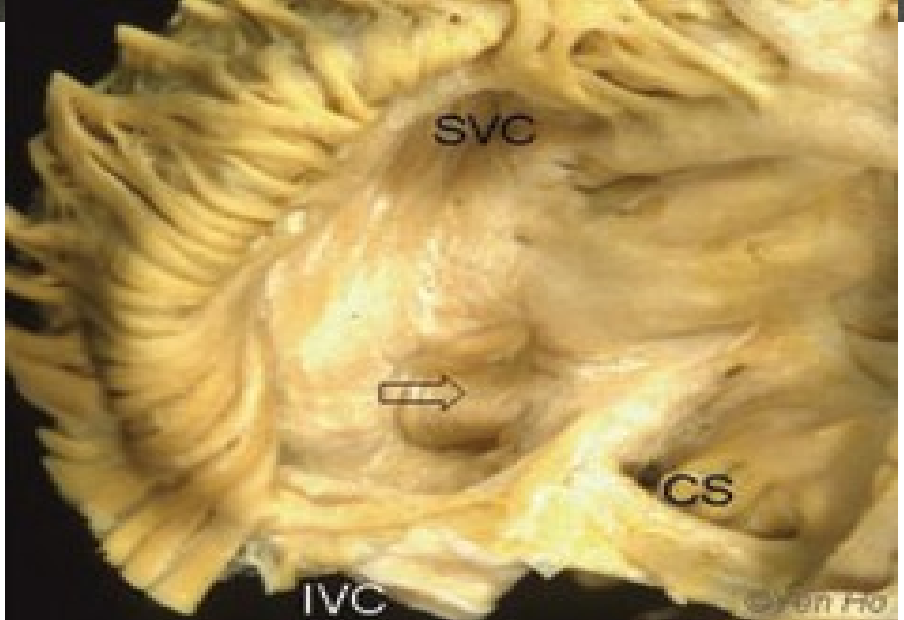
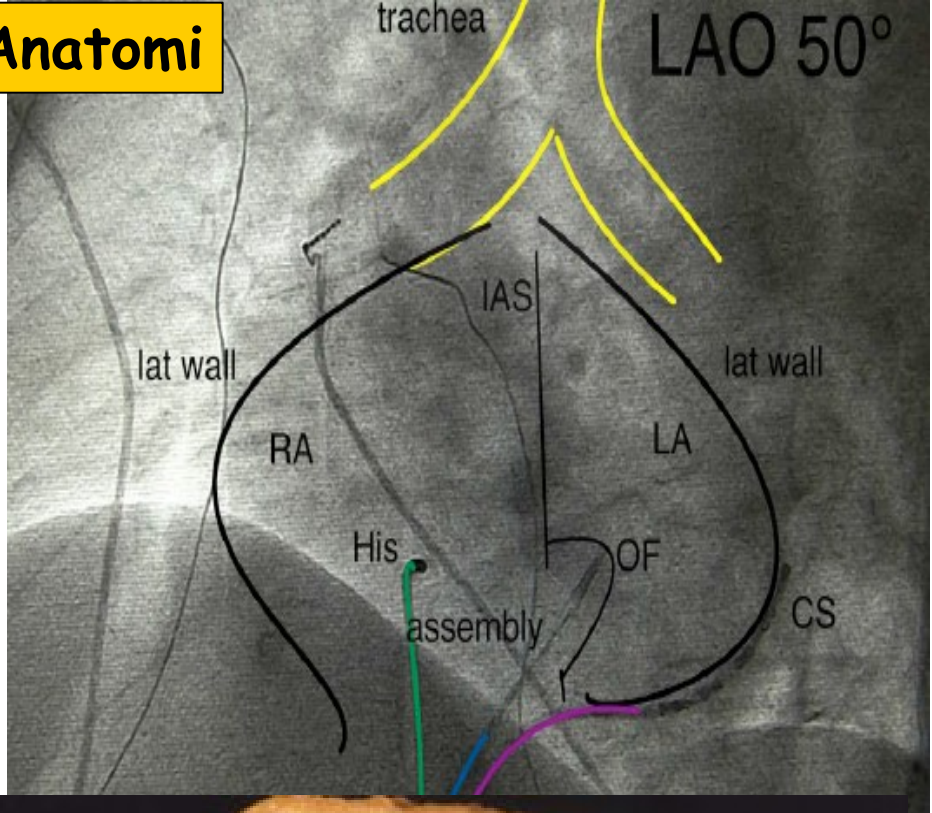
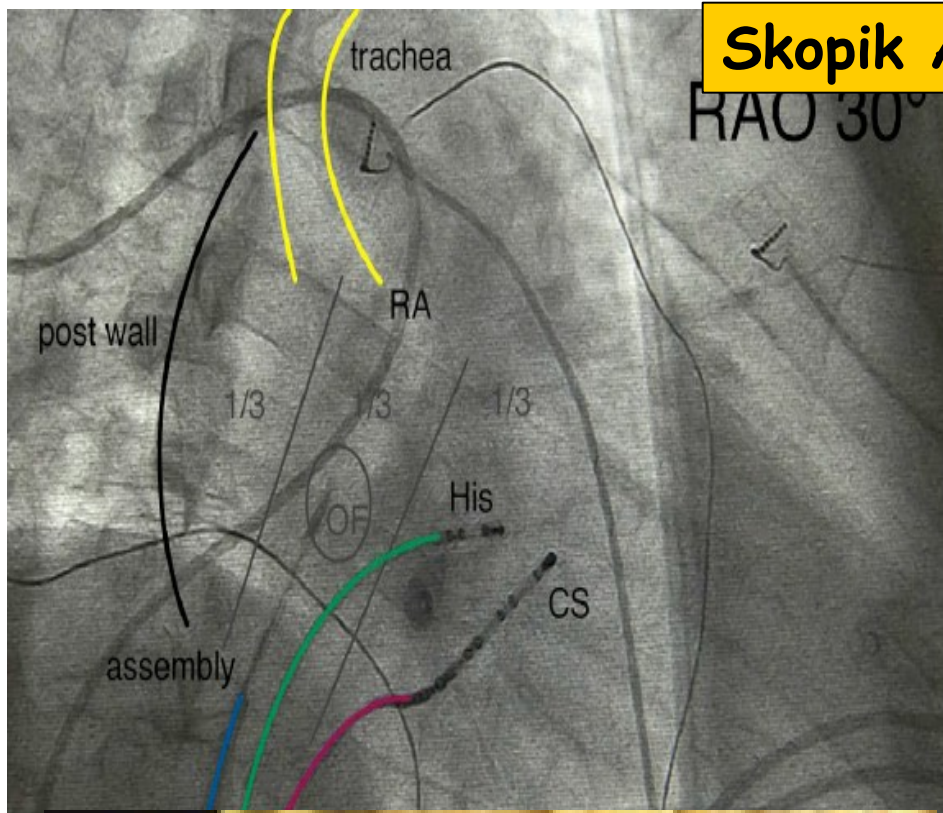


De Ponti, R. et al. J Am Coll Cardiol 2006;47:1037-1042

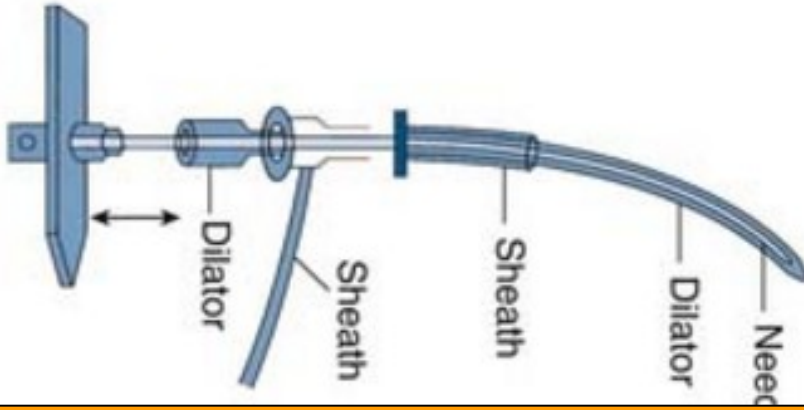
Geleneksel yöntem ==> 4690 TS, Kompl. % 0,72 % 0,59, >100 TS

Matoshvili Z. et al. Europace, 2016

Skopik Anatomi



TS öncesi



- ✓ Heparinizasyon yöntemi (warfarin tedavisi altında/Ø)
- Ponk. öncesi/sonrası
- ✓ CS kateteri yerleşimi ve RV/His kateteri pozisyonu
- ✓ Dilatatöre iğne stile çıkarılmadan yerleştirilmeli
- ✓ Basınç/kontrast bağlandıktan sonra dilatatörün distal ve proks. kısmından flash geldiği görülmeli
- ✓ Dilatatör/iğne sheat distaline ulaştığında dilatatörü itmek yerine sheat geri çekilerek sistem kilitlenmeli (SVC hasarı)

SVC



SVC → RA → FO



RAO



TENTING



0.032 → LSPV



Kontrast → LA



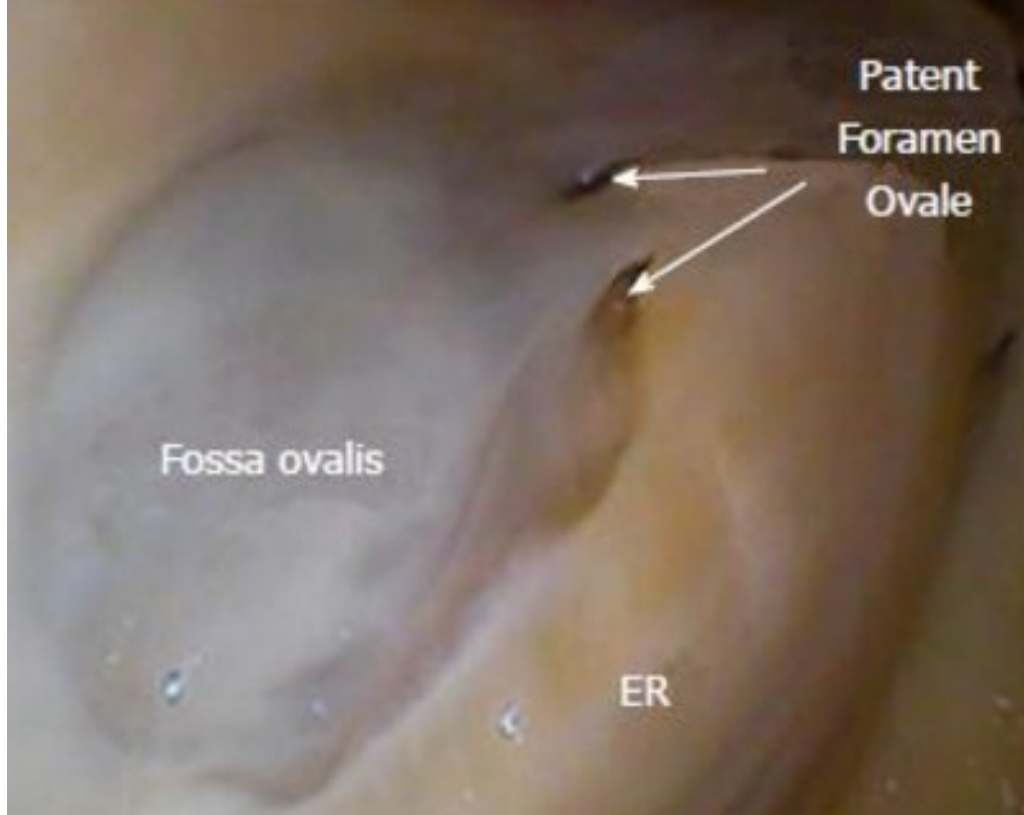
Kontrast



Kontrast



PFO geiř



PVI → iřlem suresi ↑

Zor vakalar

DİRENÇLİ SEPTUM

İlk işlem % 7; $\geq 2^{\text{nd}}$ % 28

Klinik/TTE ön gördürücü yok

Hu et al 2008

- 1- Beklemek (Let the heart do the puncture)
- 2- Mosquito yöntemi (stile)
- 3- RF enerji
- 4- Özel iğne (J)

De Asmundis et al. Europace 2009;11:657-59

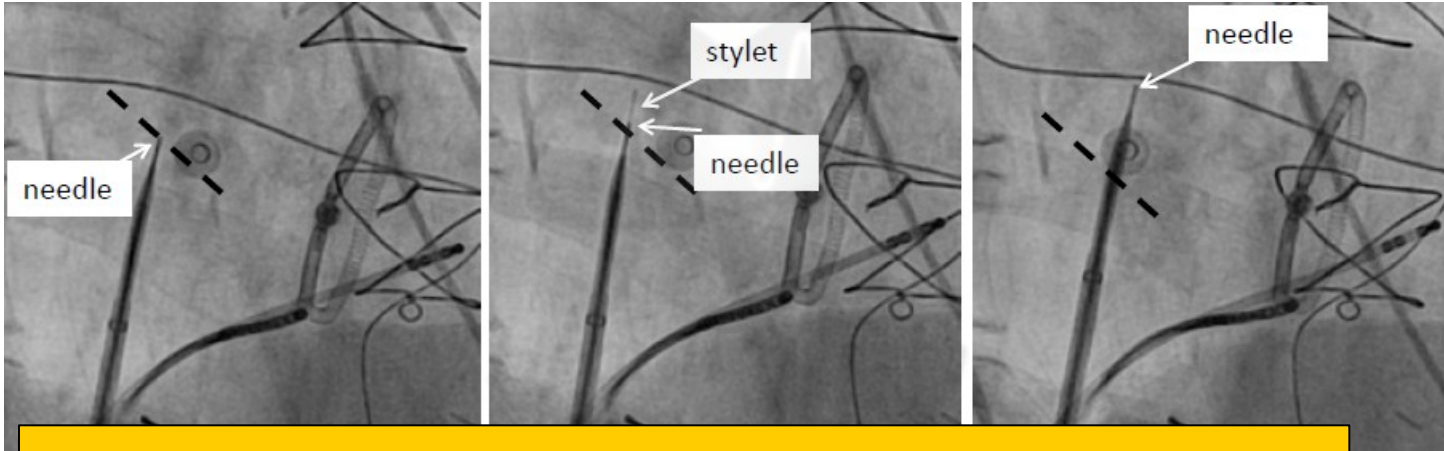
De Ponti et al. Europace 2010;12:668-73

Knecht S. et al. Circ Arrhythmia Electrophysiol 2008;1:169-174.

Wadehra et al. Europace 2011;13:1401-05

Winkle et al. Heart Rhythm 2011;8:1411-15

Mosquito yöntemi

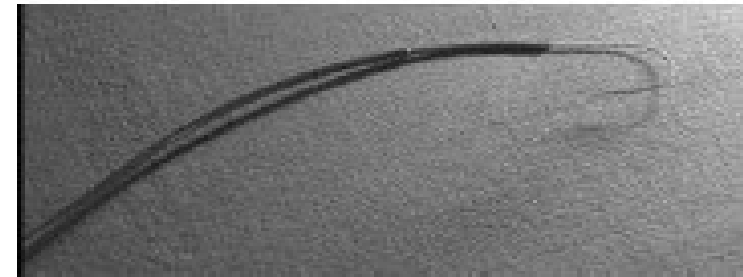
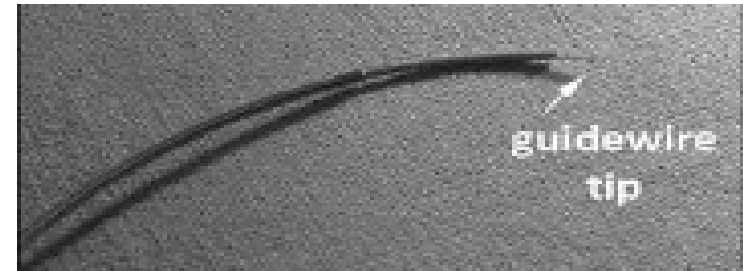
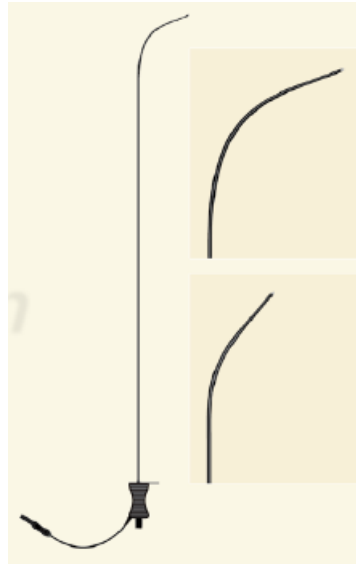


Fossa ovaliste olduğundan emin olunmalı

RF unipolar 30W

RF_iğne

J iğne

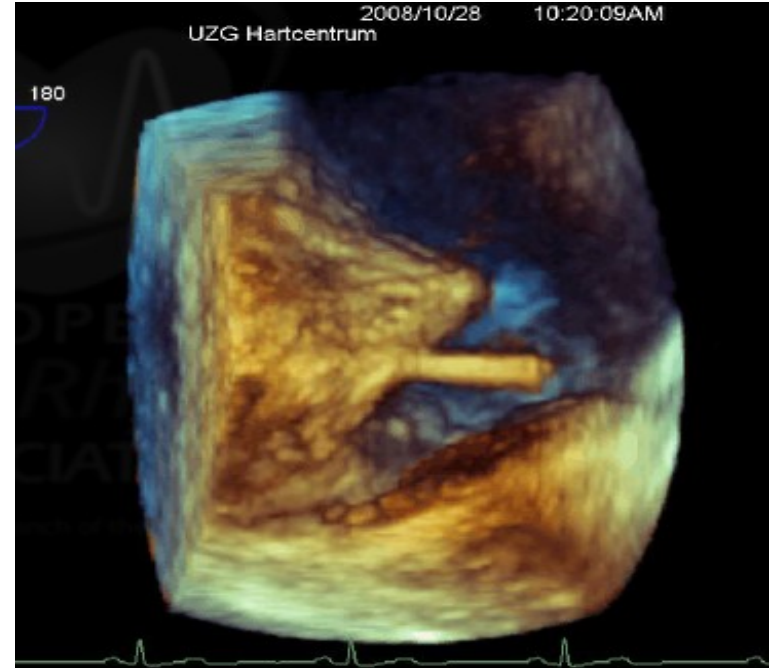


Atriyal anevrizma

Normal popülasyonda % 7,9
Salmasi et al. Angiology 2010

% 4,9
Serafini et al. Italian Heart Journal 2003

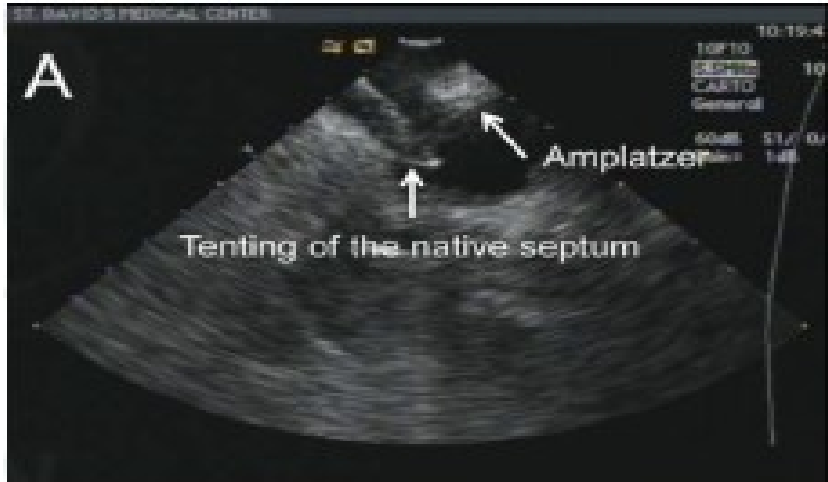
TEE/ICE
Mosquito/J iğne



Atrial yama/kapama cihazı

Atrial yama → nativ septum veya yama

Atrial kapama cihazı → Cihaz yanından (postero-inferiyor)
Cihaz içerisinden

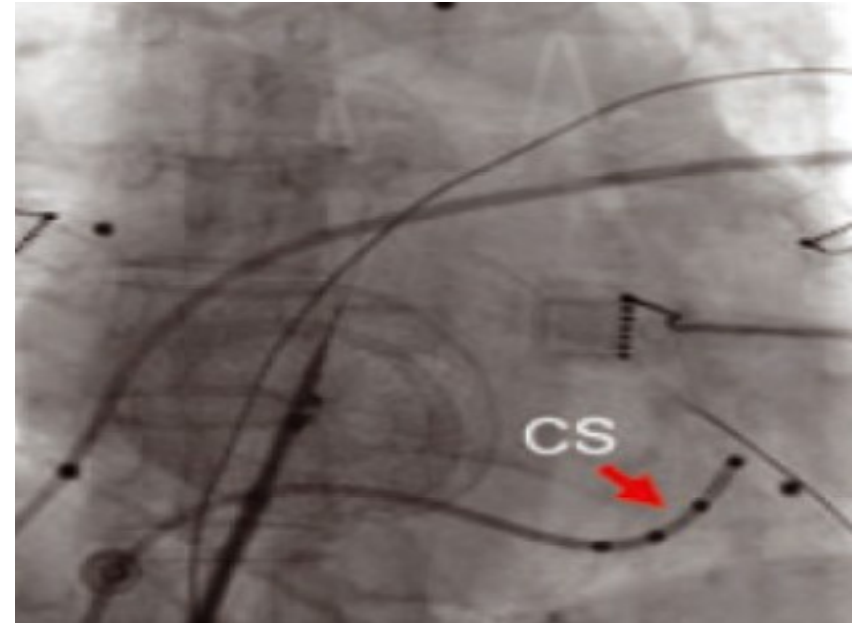


Santangeli et al, Heart Rhythm 2011;8:1669-1675

Kapama cihazı > 26mm
Cihaz içerisinden tek TS

Kapama cihazı ≤ 26mm
Nativ septum 2 TS

Li X, et al. Heart Rhythm, 2014;11:330-335

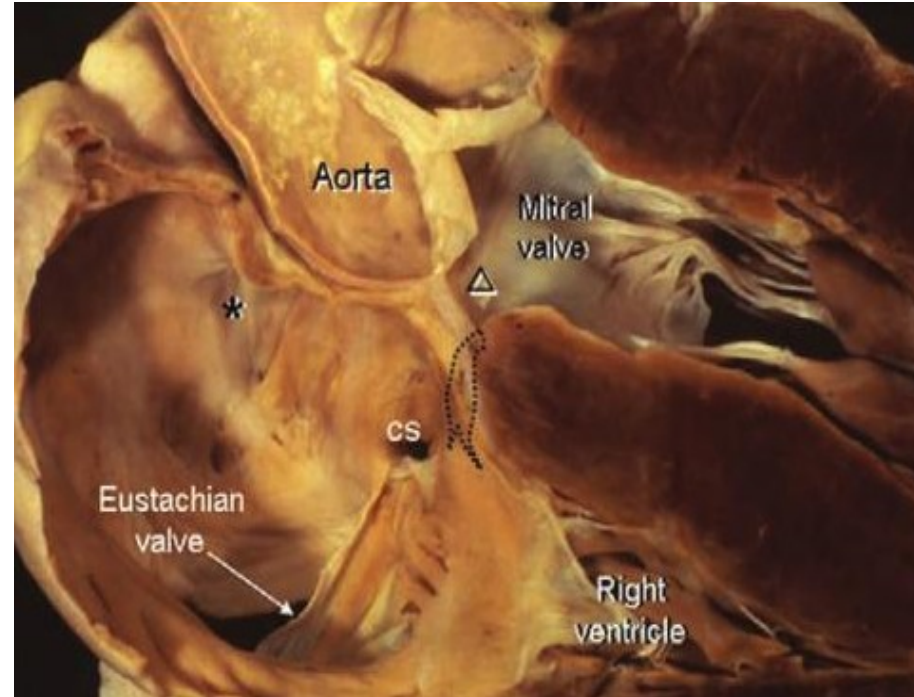
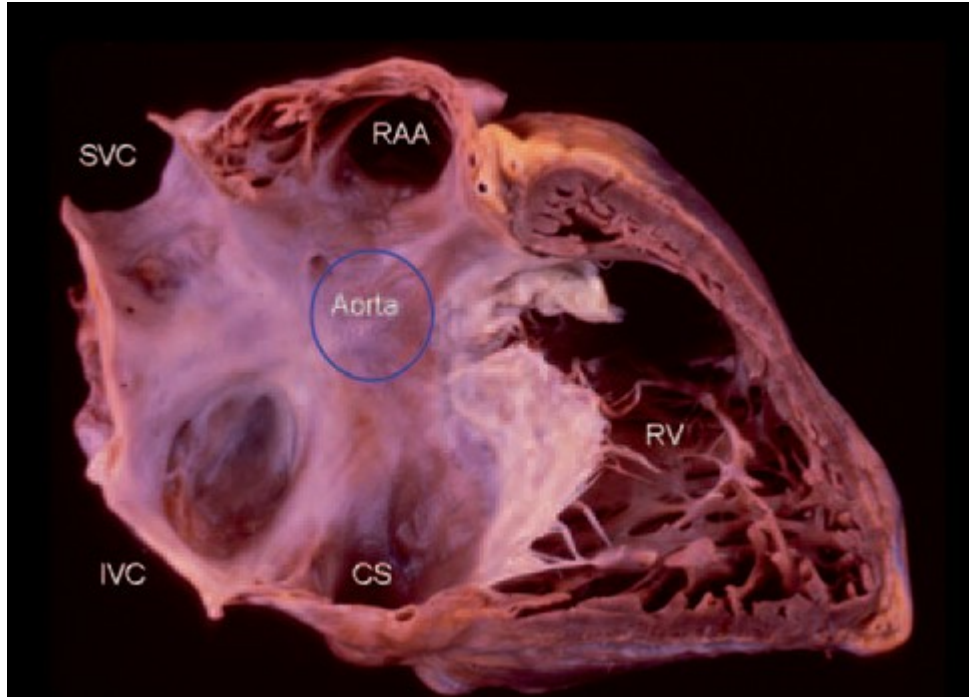


Chen et al, JCE 2012;23:1139-1141

Komplikasyonlar

	2003	1992–2002
No. of procedures	1,764	3,756
No. of procedures with complications	14 (0.79%)	28 (0.74%)
Death	—	1
Aortic root perforation	—	3
Cardiac perforation	3	3
Cardiac perforation with tamponade	2	3
Needle puncture of aortic root	1	1
Needle puncture of right atrium	4	9
Arterial thromboembolism	1	3
Arterial air embolism	—	2
Transient ST-segment elevation	3	2
Pericarditis	—	1

Aortik kök ponksiyonu/perforasyonu



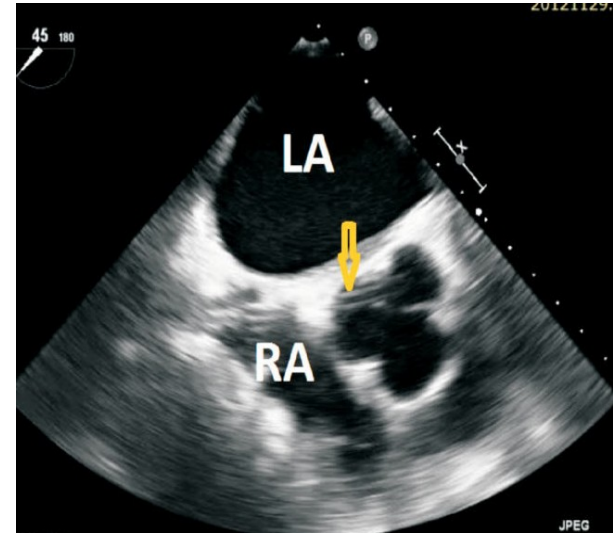
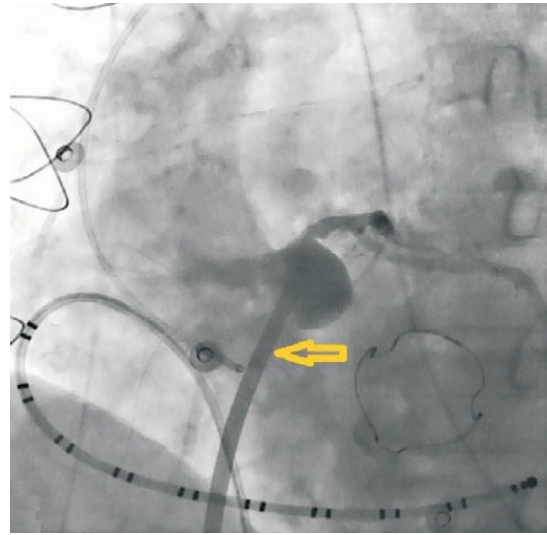
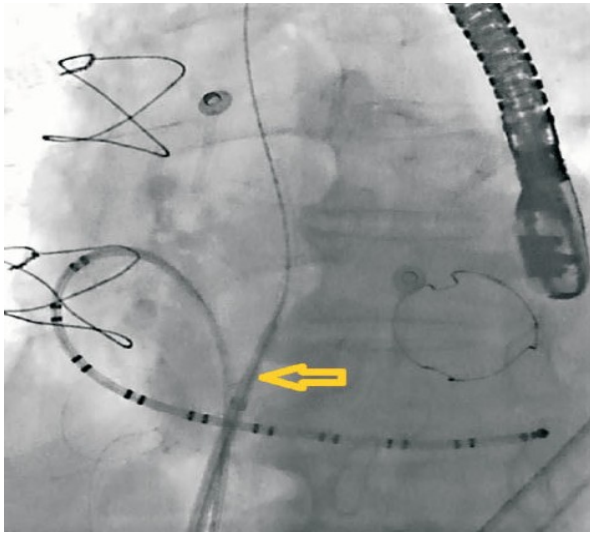
Anteriyor-superiyor ponk.

İğne kolaylıkla ilerletilemiyorsa dikkat!!!

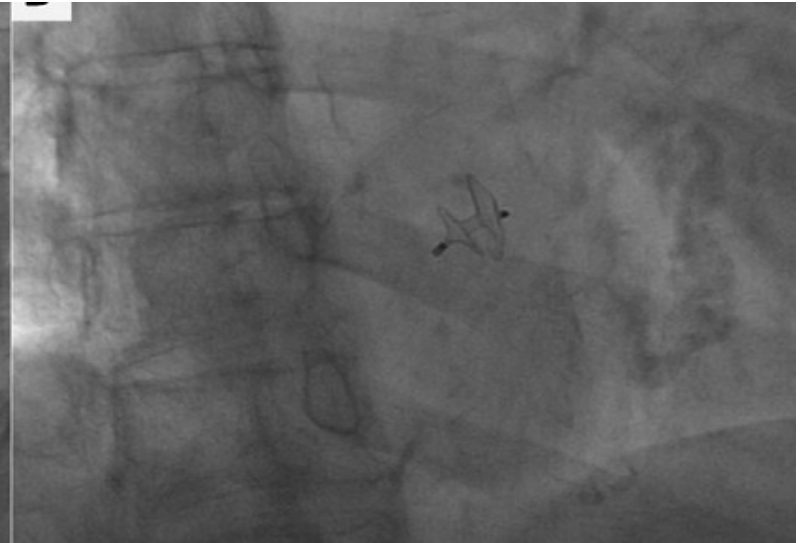
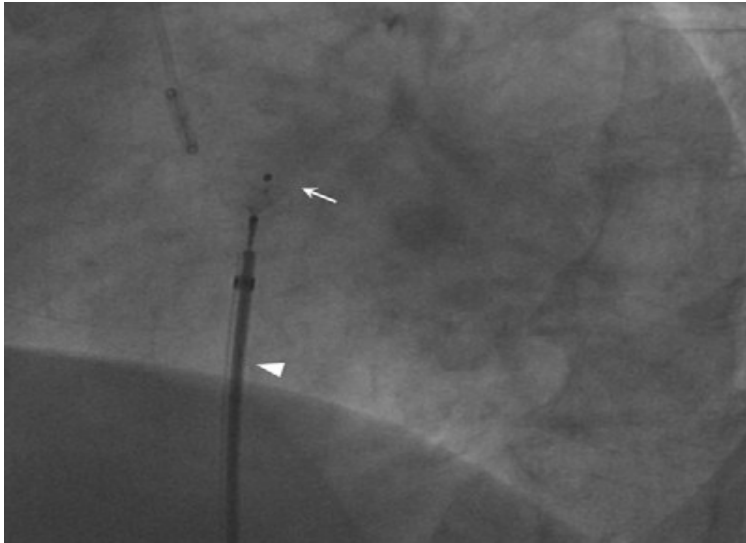
Sadece iğne → iğne geri çekilerek EKO/izlem

Dilatatör/sheat → sistem geri çekilmemeli, tel gönderilerek acil cerrahi/kapama cihazı? için hazırlık&hemodinamik+EKO izlemi

Aortik kök ponksiyonu/perforasyonu



Acta Cardiol Sin 2014;30:490-492



Sonuç

Muhtemel riskli hastaların önceden saptanması

Gereğinde TEE/ICE eşliğinde TS

Atriyal anevrizma

Kardiyak hipertrofi/HKMP

Konjenital kalp hastalığı (BT&MRG)

Skolyoz, deformite

En az 2 açı (RAO!!-LAO)

PVI → PFO Ø, inferiyor ponk. tercih edilmeli

İğne → *gitmiyorsa itme!! Kontrol et (kontrast)!!*

Emin olunmadan dilatatör itilmemeli

Tamponad, sheatler geri alındıktan sonra da gelişebilir!!

İdeal geçiş: Kademeli → iğne → dilatatör/tel → sheat