

Neuroradiologisk kärldiagnostik – nutid och framtid

Johan Wikström, Uppsala
Roger Siemund, Lund
Birgitta Ramgren, Lund



Röntgenveckan 2010

Angiografi

Avbilda kärl med eller utan kontrastmedel

Computed Tomography Angiography – CTA

Magnetresonansangiografi – MRA

Digital Subtraktionsangiografi - DSA

Röntgenveckan, Örebro 22 september

Kl. 14.15 – 14.45 – Johan Wikström – MRA

Kl. 14.45 – 15.15 – Roger Siemund – CTA

Kl. 15.15 – 16.00 – Fika

Kl. 16.00 – 16.30 – Birgitta Ramgren – DSA

Kl. 16.30 – 17.00 – Diskussion, framtid och rekommendation

Digital subtraktionsangiografi

Birgitta Ramgren
BFC/Röntgen
Neuroradiologi
Skånes Universitetssjukhus/Lund

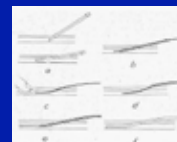


Historik

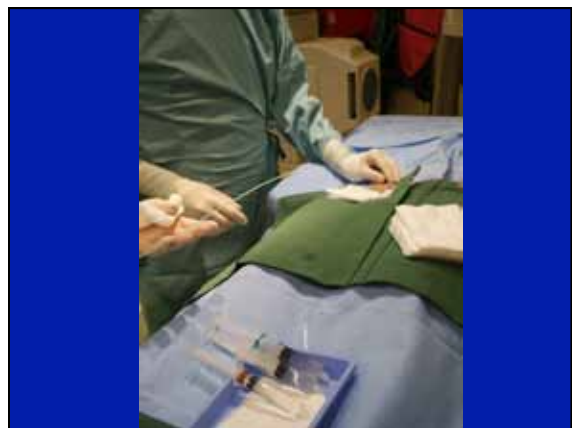
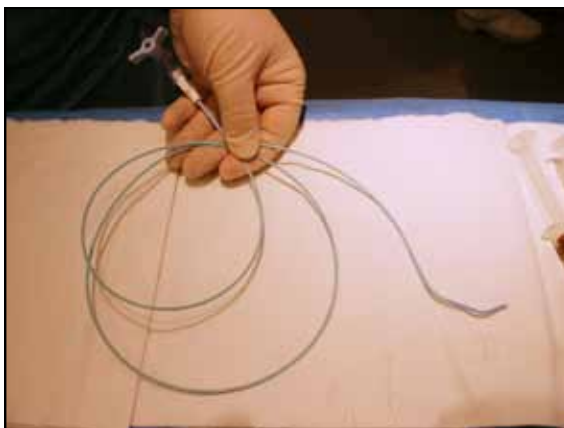
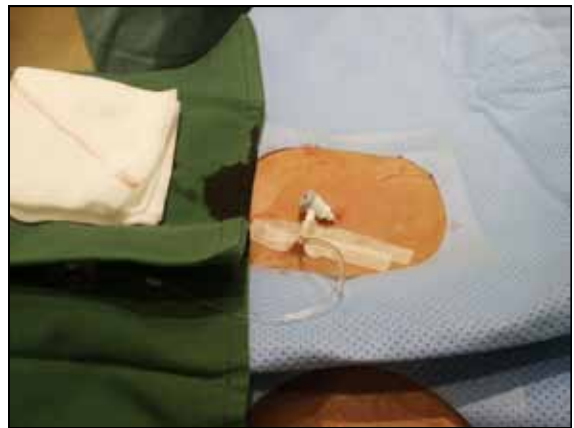
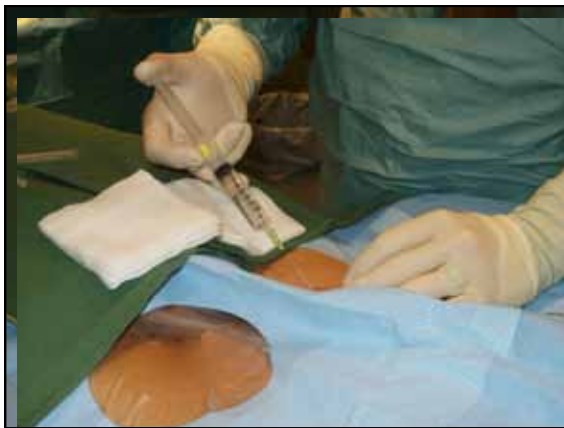
1927 – Egas Moniz (neurokirurg, Portugal)
Direkt punktion a carotis interna

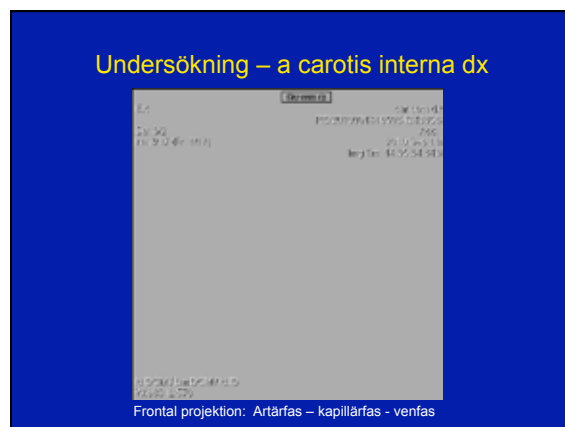
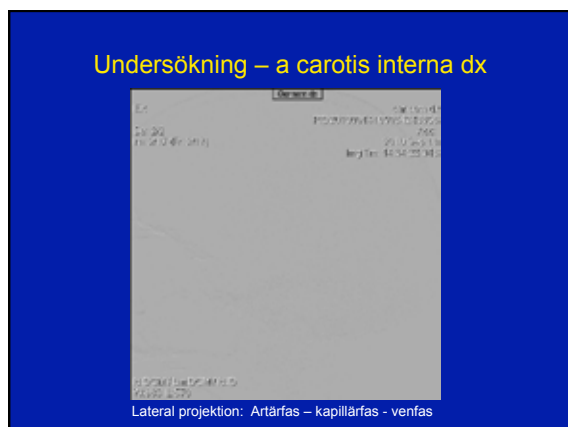
50-talet – Sven Ivar Seldinger
Punktion a femoralis med inläggning av kateter

70 – 80 -talet - DSA



Teckning från originalarkivet som illustrerar
Seldinger-tekniken (åttioan med illustration från Acta
Radiologica) SFMR minneskrift





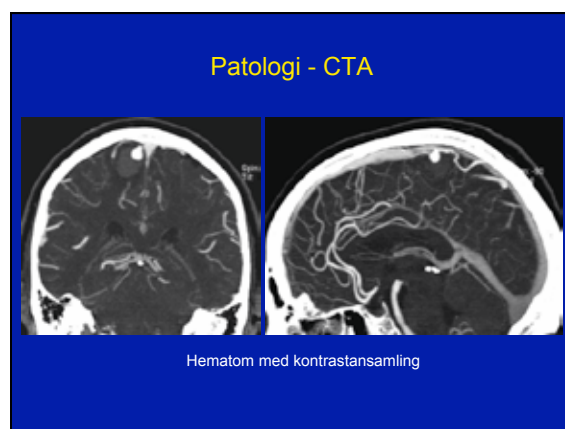
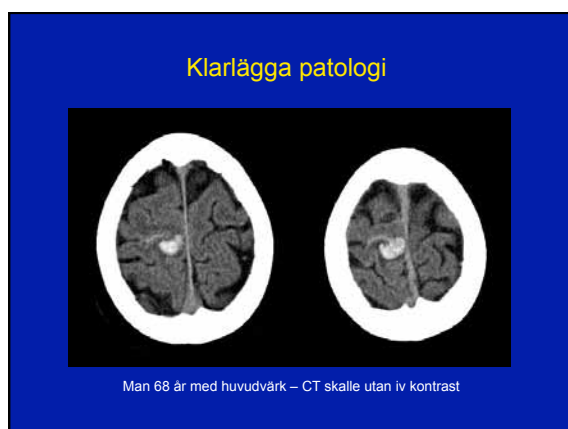
Fördel DSA

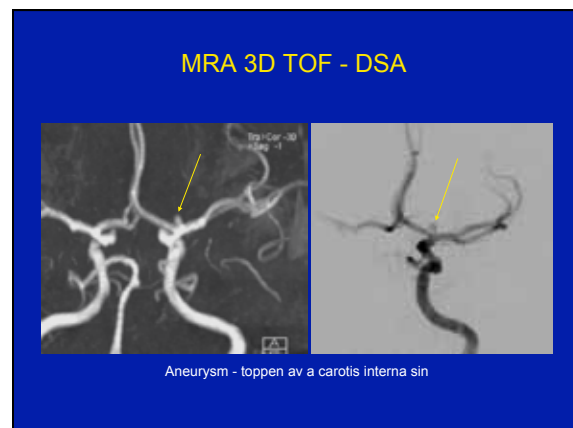
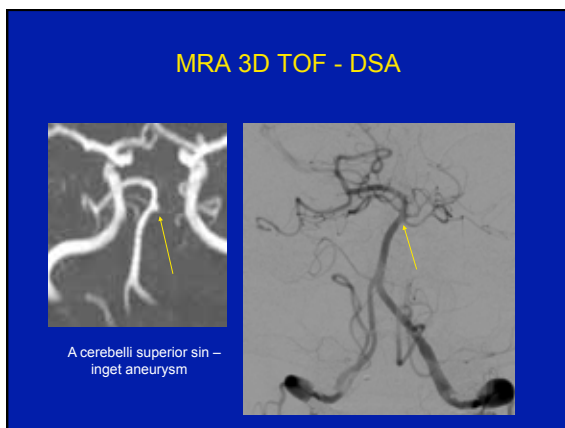
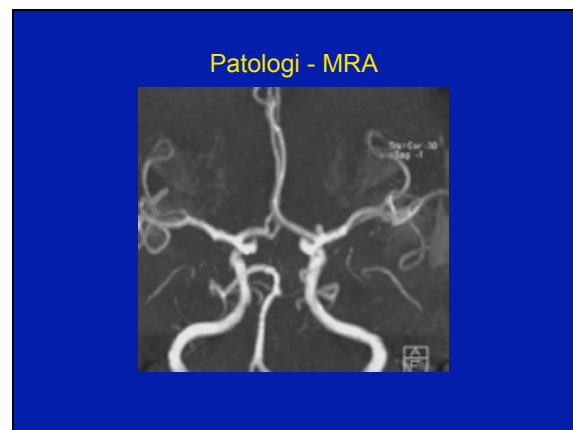
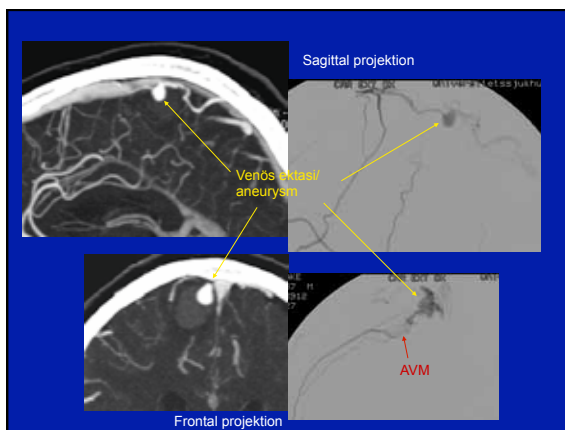
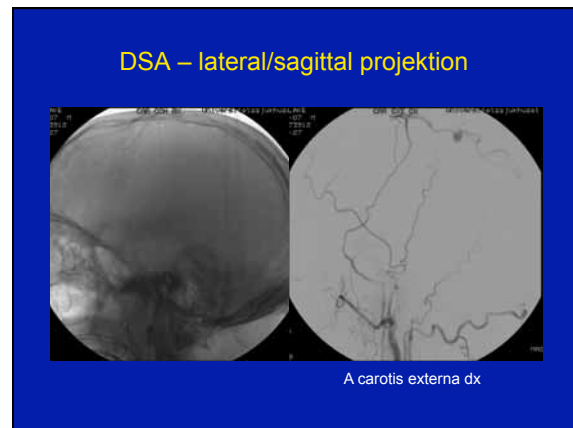
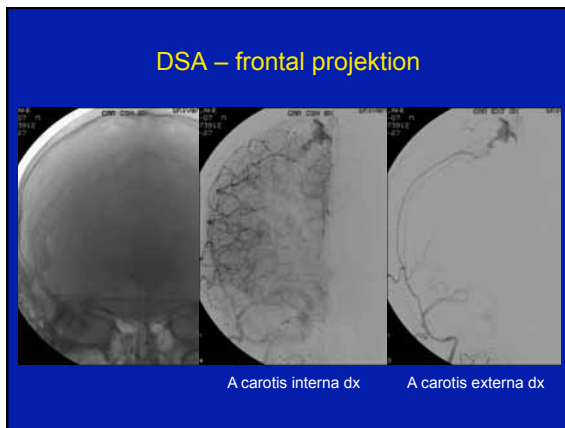
- Klarlägga patologi upptäckt med CTA och MRA
- Dynamisk undersökning
- Kollateralcirkulation
- Ställningstagande till intervention

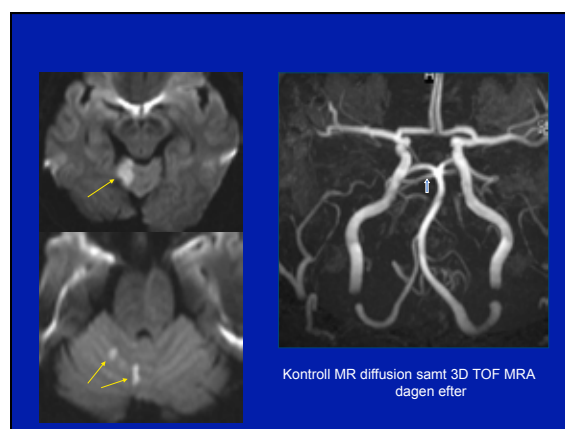
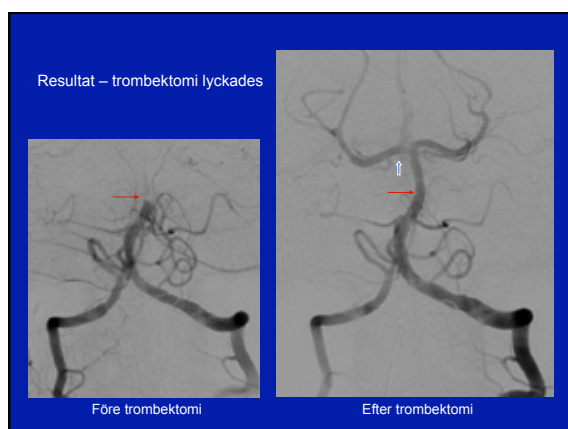
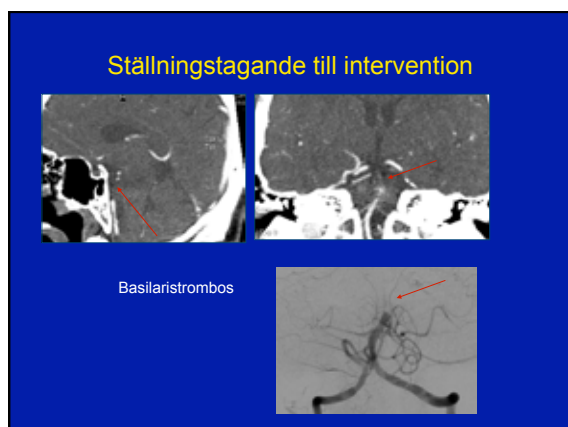
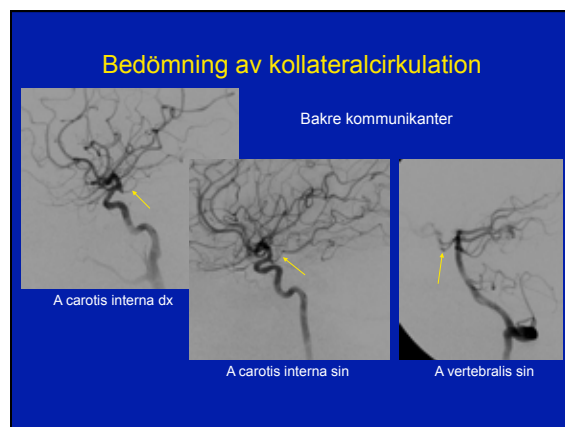
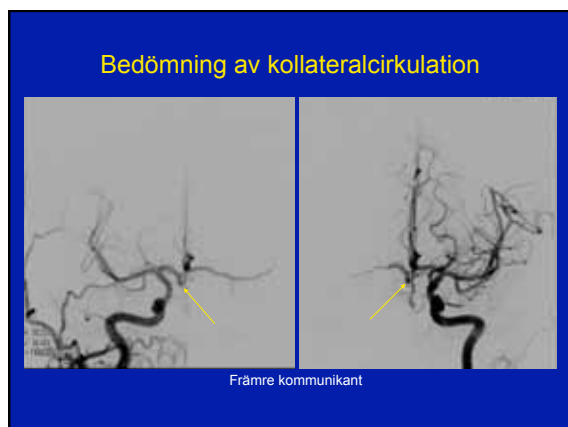
Nackdel - DSA

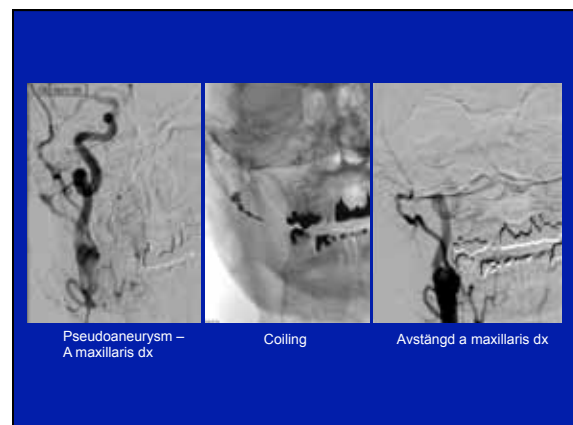
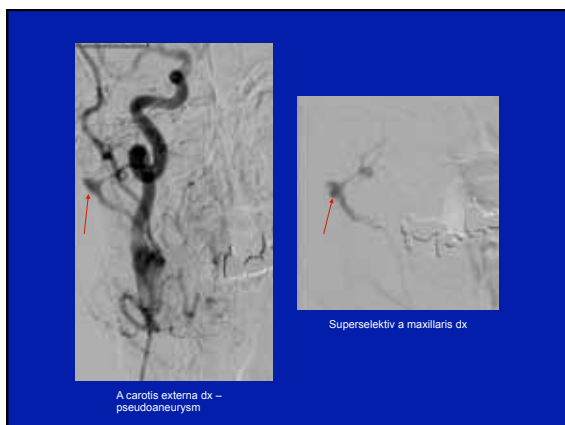
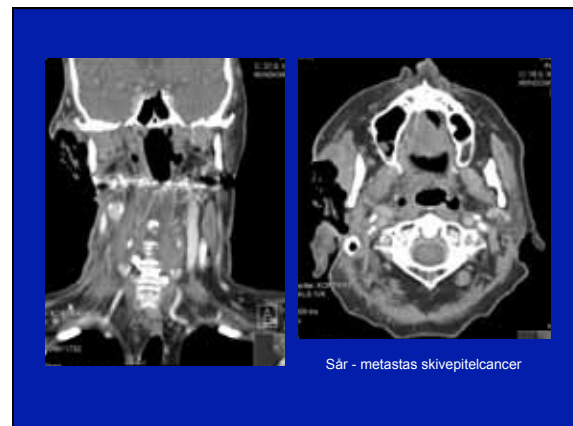
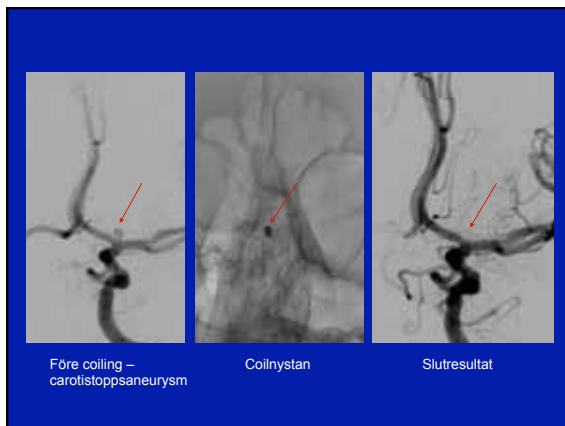
- Invasiv teknik
- Tromboemboliska komplikationer – 1,3%* (0,5-4%)
- Strålning – effektiv dos - 3 mSv (Lund)
- Obehag för patienten

*Wilinsky et al (2003) Neurologic complications of cerebral angiography: prospective analysis of 2,899 procedures and review of the literature. Radiology 227:522-528









Sammanfattning - DSA

- Ej förstahandsutredning
- Komplettering till CTA och MRA
- Utförs på neuroradiologisk universitetsklinik
- I samband med intervention



Rekommendationer

Halsens kärl

Carotisstenos:

Ultraljud duplex
CTA
CE MRA

Dissektion a carotis interna/ a vertebralis:

För diagnos:

3D TOF MRA samt PD/T1 SPIR
CTA
CE MRA (ffa vertebralisdissektion)

Uppföljning:

CTA
CE MRA

Rekommendationer

Intrakraniella kärl - Artärer

Aneurysm screening:

3D TOF MRA

CTA

Aneurysm SAH:

CTA

Aneurysm post-coiling:

3D TOF MRA

CE MRA

AVM, AV-fistel:

3D TOF (AV-fistel)

CTA

Dynamisk CE MRA

Vaskulit:

CTA

DSA

MRA (om MR utföres)

Rekommendationer

Intrakraniella kärl - Vener och sinus:

Sinustrombos

CTA

GD MR-venografi

2D PC el 2D TOF MRA