

1979 - Brain Blood Flow
Seminar Lincolnshire

**22. SURGICAL RECONSTRUCTION
of VERTEBRAL BASILAR ARTERY
FLOW - Twenty Year
Experience with 184 Cases**

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**184 patients underwent 201 surgical
procedures** to improve vertebral basilar
blood flow in the past 20 years.

Presenting symptoms included residual
hemiplegia 11; monoplegia, 31;
numbness of hand 37, leg 10 or face 11;
limb pain 22; diplopia 24; blurred vision
1; hemianopsia 4; quadrant defect 2;
dysarthria 47; aphasia 24, hearing loss
10; hoarseness 1; tinnitus 13; vertigo
140; ataxia 90; syncope 93; nystagmus
16; memory lapse 28; convulsions 4;
headache 43; dysphasia 11; nausea 12
and coma 9.

Pre-operative arterial diagnosis was
based upon the use of angiography of the
head and neck with multiple rotational
views employing the Seldinger
technique, radioisotope brain scan and
non-invasive doppler study. The surgical
procedure was dependent upon the
angiographic abnormalities noted on
angiography and the anatomical findings
at surgery.

**Fifty six (28%) of the 201 surgical
procedures involved reconstruction of
the innominate or the subclavian
arteries.** The procedures included
reconstruction of the innominate artery
(16), bypass to the subclavian artery,
vein or dacron, (16), endarterectomy of

the innominate (1) or subclavian (17)
arteries, reconstruction of the subclavian
artery by dacron prosthesis (3) and
subclavian to common carotid
anastomosis in 4 cases.

**One hundred forty nine (72%)
procedures directly involved the
vertebral artery.** These included
laminectomy with decompression of the
vertebral artery (21), endarterectomy of
the vertebral artery (49), correction of
rotational extraluminal obstruction and
redundancy (51), segmental resection
and end to end suture (5), direct
vertebral artery anastomosis (15) to the
thyrocervical trunk (2), the common
carotid (12), the external carotid (1), and
vein graft to the vertebral artery from the
external carotid (1) and the subclavian
artery (2). The vertebral artery was
ligated on two (2) occasions.

Postoperative neurological symptoms
were the residuals of preoperative
symptoms: vertigo 13%/ ataxia 11%,
nystagmus 24%. Disturbances of speech
and hearing included dysarthria 26%,
aphasia 18%, tinnitus 38% and hearing
loss 50%. Postoperative bruits were
noted in 15%.