mental group and the unoperated control group of
animals the grey matter was dissected from the white
matter with the aid of a dissecting microscope, and
separate flow rate determinations were made for the
grey and white matter.

Flow rates in traumatized tissue demonstrated
marked differences in regional perfusion of white
matter and grey matter. Grey matter perfusion was
nearly obliterated, while white matter blood flow
persisted and indeed was higher than in the uninjured
controls. Cardiac output dropped after injury and
returned to only approximately half its normal
level during the course of the four hour experiment.
Circulatory blood volume also decreased after injury.
Mean arterial blood pressure rose immediately after injury but returned to normal
within five to 10 minutes.

These findings do not support the concept of
ischaemia as a factor in failure of function of white
matter after trauma. If trauma causes patho-
biological alterations in the cord it may be possible
to reverse these by utilizing the intact white matter
circulation for chemotherapy.

REPORT ON 100 CASES OF SYRINGOMYELIA

J. Hankinson (Newcastle upon Tyne) described the
clinical presentation and radiological findings in 100
cases of typical and atypical syringomyelia. In the
more typical cases stiffness of the neck, numbness
of the hands, and pain in the neck, shoulders and arms
featured but there were also cases presenting with
headache, oscillopsia, diplopia, and vertigo, and, in
two cases, drop attacks. Seventy-eight cases presented
with typical syringomyelia clinically but 11 showed
signs of hydrocephalus and 29 had ‘brain-stem’
signs. These latter consisted of nystagmus in 27
cases, trigeminal sensory disturbance in four, wasting
of the tongue and palatal weakness in three, and
cerebellar incoordination in two. The general appear-
ance of these patients was normal in 65, but there
was a noticeably short neck in 13, 22 had scoliosis,
and five had large heads. In seven patients the onset
of symptoms was associated with trivial injuries.
Radiographs of the skull were normal in 80, showed
a degree of basilar impression in 12, and exhibited
signs of arrested hydrocephalus in seven. Radiogra-
phs of the cervical spine were normal in 74, showed
a wide AP diameter in eight, and atlanto-
occipital fusion or occipitalization of the atlas in 16.

Ninety-two cases were studied by myelography, of
whom four were examined only in the prone position.
Tonsillar ectopia was found in 62 cases with an
expanded cervical cord in 34, and the appearances
were considered normal in nine. Posterior fossa de-
compression was performed on 47 of the 63 patients
showing ectopia. Eight of the 18 patients with
arachnoiditis of the cervicomedullary junction under-
went operation. Of the 47 patients shown by myelo-
graphy to have tonsillar ectopia three were cured, 30
were improved, and 12 showed no change after
operation. There was one postoperative death, and
one patient died later from leukaemia.

SPINAL DURAL PATCH GRAFTS IN EXPERIMENTAL
ANIMALS

K. Kurokawa, Stewart Dunsker, and Frank H.
Mayfield (Cincinnati) had considered various
methods of repairing torn spinal dura mater with
the objective of preventing pseudomeningoceles,
cerebrospinal fluid leaks, meningitis, and low pres-
sure headaches. In 18 dogs a segment of lumbar dura
mater had been removed under general anaesthesia
and the defects had been repaired with autogenous
dura mater, fascia, muscle, and fat. The animals
were killed at various times up to six months post-
operatively and the graft sites had been examined
histologically. Muscle, fat, and fascia had all been
found effective but each tissue had its own disad-
vant. Fascia was more rigid and was therefore
more difficult to use to close small defects. Muscle
caused a moderate inflammatory response for two to
eight weeks, although the authors did not encounter
any adhesions between the muscle grafts and the
underlying neural elements. Fat induced low grade
inflammatory response but was difficult to sew. There
were no long-term differences between these three
substances, all of which were associated with a good
formation of new dura mater. When tears occurred
near the axilla of a spinal nerve root they could be
closed with large muscle or fat plugs introduced
through mid-line dural openings and pulled into
the torn areas with sutures.

EXTENSION OF CARCINOMA OF THE CERVIX
to the lumbar spine

Robert G. Fisher, Steve Ackcr, and Ralph W. Day
(Oklahoma) noted that carcinoma of the cervix was
not generally thought to involve the spine. In two
recent cases lumbar vertebral compression leading to
paralysis had been due to compression of vertebrae
by metastases in lymph nodes. It was considered that
decompressive laminectomy followed by radiation
therapy only temporarily altered the course of the
disease. The authors considered that present radio-
therapy techniques did not prevent the development
of the lesions.

MEYLOVASCULAR COMPLICATIONS OF CERVICAL
RHIZOTOMY

H. Hamlin and W. H. Sweet (Boston) drew attention
to the crucial importance of the extrinsic collateral
Proceedings: Report on 100 cases of syringomyelia.

J Hankinson

*J Neurol Neurosurg Psychiatry* 1975 38: 412
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