

OCCULT INTRASACRAL MENINGOCELE

Recai Tuncer, M.D., Mete Saveren, M.D., Timur Sindel, M.D., Ömer Bilecen, M.D., Saim Kazan, M.D., Medet Yıldız, M.D.,

Departments of Neurosurgery and Radiology (TS), Akdeniz University, Faculty of Medicine, Antalya, Turkey
Turkish Neurosurgery : 92-94, 1989

SUMMARY :

Two cases of occult intrasacral meningocele are reported. Clinical picture, radiological findings and treatment are discussed.

Enderle (1932) was the first to use the term "Occult intrasacral meningocele" (2). Trauma is considered as an etiological factor, even though most of the occult intrasacral meningoceles are congenital (3, 7).

The patients may be asymptomatic. The symptoms are produced as a result of compression and deterioration of the sacral roots by meningocele.

KEY WORDS : Meningocele

INTRODUCTION

Case 1 :

A 38-year-old male was admitted to our department with the complaint of a sudden pain in his left leg starting 45 days previously. It was aggravated by sneezing or coughing. He had had conservative treatment before admission, but did not improve. Lumbar muscle spasm and weakness in dorsal flexion of the left foot was found in the physical examination. Straight leg raise test was positive in 40. The rest of the neurological examination was found normal. CSF was clear and contained 44 % protein and 4 cells. Plain lumbosacral radiographs were evaluated as normal at first, but afterwards a retrospective evaluation revealed that the canalis sacralis was widened and the posterior wall of the sacrum was thinned. Myelography showed an epidural defect in the left and a contrast-filled meningocele within the sacral canal. (Fig.1) A computed tomography scan demonstrated a contrast-filled cystic structure starting with a narrow isthmus at the level of sacral 2 and extending into the distal part of the sacrum. (Fig.2).

At surgery, L5 disc was removed beneath the left L5 root at first, then laminectomy of the S1-2-3 was performed. Since the laminae were paper-thin, sacral laminectomy was done easily. The wall of the cyst was also very thin and very fragile. The stalk of the meningocele was found and ligated, then the cyst was excised.

The sacral nerve roots were extending anteriorly to the cyst. The patient had a mild low back pain in the immediate post-operative period. Three months after operation, he was found completely asymptomatic.



Fig.1 : Case 1. Myelography demonstrated an epidural defect in left L4-5 and a contrast filled meningocele within the sacral canal.

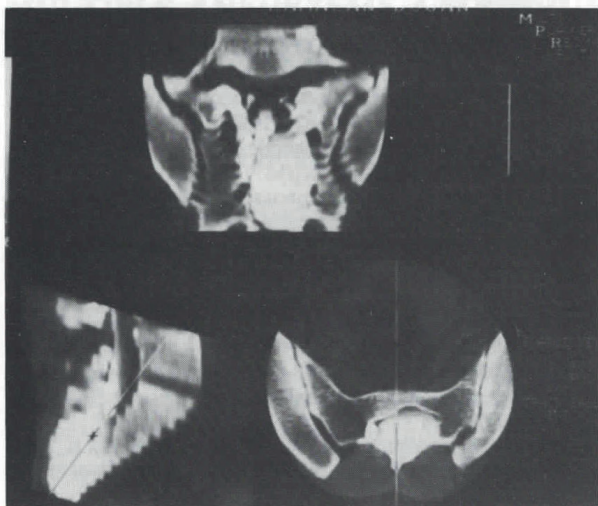


Fig.2 : Case 1. Computerized tomography-myelography scan in the axial and sagittal plane demonstrated a contrastfilled cystic structure starting with a narrow isthmus in the level of sacral 2 and extending into the distal part of the sacrum.

Case 2 :

A 39-year-old male was admitted to our department with a complaint of low back pain radiating into both legs. The pain had started 2 years previously and increased day by day, conservative treatment gave no benefit. Physical examination disclosed lumbar muscle spasm and absence of ankle reflex at the left. Plain radiograms of the lumbosacral spine were considered normal. Myelography revealed a contrast-filled sac extending the inferior of S1. (Fig.3).

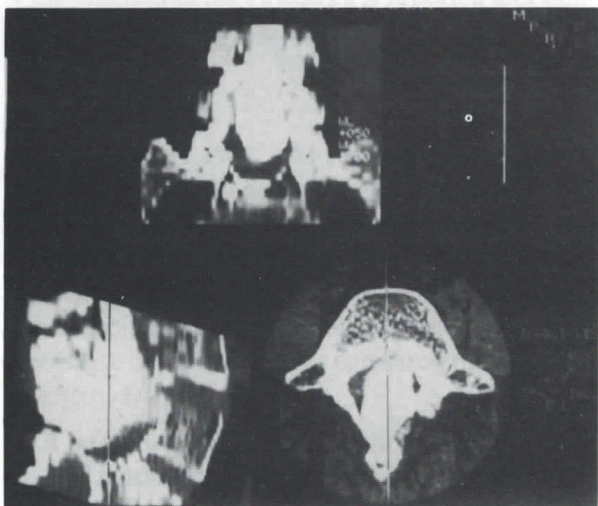


Fig.3 : Case 2. Computerized tomography-myelography scan in the axial and sagittal plane demonstrated a welldefined, oval, contrast-filled cyst which was starting at the level of L4-5 and prolonging to the inferior of S1.

In the operation, total laminectomy of L4, L5, S1 was performed. The lumbar laminae were normal in thickness, but the lamina of S1 was very thin. A thin-walled sac which had wide-based communication with the caudal portion of the thecal sac was seen

below the laminae. It was torn easily. The sac was excised and the opening was closed with a fascial graft.

The patient had urinary retention and mild low back pain in the immediate post-operative period. He recovered full bladder control by the 4th day. He had intermittent low back pain one month after operation.

DISCUSSION

Occult intrasacral meningocele is a rare abnormality. Enderle described it as an abnormal dilatation of the meninx within the spinal canal (2). Howiesen et al. reported three cases of what they called expansion of the subarachnoid space in the lumbosacral spine (5). Joseph and McKenzie suggested that the prolongation of the subarachnoid space beyond the normal level may probably be better described as a caudal diverticulum of the thecal sac (6). Nabor et al. also considered it as diverticula and suggested a classification which divides spinal meningoceles into three groups, and described occult intrasacral meningocele as Type 1 B (7).

The most frequent symptom in this pathological condition which may become manifest at any age, is low back pain radiating down to the legs. An almost equally common finding is bladder dysfunction in the form of retention or incontinence (4, 5, 6, 8). It is possible that the clinical picture may be due to the disc lesion while the meningocele is asymptomatic and the meningocele may be detected accidentally (1, 5). In our first case, the meningocele coincided with an intervertebral discal hernia. The most characteristic and important finding is tenderness over the lumbosacral spine (4). Sensory deficit in the saddle area and/or on the legs, absence of the ankle reflex and weakness of lower extremities may be seen (3, 4, 5, 6, 8). Paravertebral spasm and absence of the ankle reflex was found in our second case.

Common associated hereditary findings like sacral hypertrichosis or pigmentation, subcutaneous lipoma, cutaneous lesions of neurofibromatosis and dermal sinus were not seen in our patients.

The most frequent finding in the plain radiographs is widening of the sacral canal with thinning of its anterior and posterior walls. We saw this clearly in our first case. In addition to this finding changes as hemivertebra, lumbalisation of the first sacral vertebra, spina bifida occulta were reported (4, 6).

Myelography is the definitive diagnostic method which demonstrates the contrast-filled meningocele sac.

Tomography may be helpful to show the dilatation of the sacral canal, the CSF-filled sac and the communication with the caudal sac.

We ligated the narrow stalk and excised the sac easily in our first case. It also is reported that this is frequently possible (4, 5, 6, 7). Joseph and McKenzie suggested that decompression of the lesion by unroofing the sacral canal may be sufficient (6).

Correspondence : Recai Tuncer, M.D.,
Akdeniz Üniversitesi
Nöroşirürji Ana Bilim Dalı
Kepez-ANTALYA

REFERENCES

1. Argillo U, et al.: Intrasacral meningocele associated to lumbar disc protrude. A case report, *J Neurosurg sc* 27(4):265-7, 1983
2. Enderle C: Meningocele intrasacrale occulto (rivelato con la mielografia). *Riv Neurol* 5:418-423, 1932
3. Fardon DF: Intrasacral meningocele complicated by transverse fracture. *J Bone Joint Surg* 62(5):839-41, 1980
4. Florez G, Ucar S: The occult intrasacral meningocele *Neurochirurgia* 19:46-53, 1976
5. Howieson JO, Norrell HA, Wilson CB: Expansion of the subarachnoid space in the lumbosacral region. *Radiology* 90:488-492, 1968
6. Joseph RA, McKenzie T: Occult intrasacral meningocele. *J Neurol Neurosurg Psychiat* 33:493-496, 1970
7. Nabors MW, Pait TG, Byrd EB et al.: Updated assesment and current classification of spinal meningeal cysts. *J Neurosurg* 68:366-377, 1988
8. Wilkins RH: *Intrasacral cysts. Neurosurgery*; Wilkins R.H., Rengachery, S.S. (Ed.) McGraw-Hill Book Company, 1985, pp:2061-2070