

Obturator Nerve

N. obturatorius (L2-L4) is a thick mixed nerve arising from the plexus lumbalis. It contains *motor fibers* for the adductors of the thigh and *sensory fibers* for the skin of the inner thigh. It is the only nerve arising from the plexus lumbalis on the *medial side* of the m. iliopsoas. It continues under the ramus superior ossis pubis to the **canalis obturatorius** and branches there, or just after passing through it: *r. anterior, r. posterior, n. obturatorius accessorius*.

Innervation area

N. obturatorius as a mixed nerve contains a **motor** and a **sensory** component.

1. **motor** - all thigh adductors
2. **sensory** - the skin on the lower two-thirds of the inner thigh and part of the clavicular and knee joint

Branches

R. anterior nervi obturatorii

It lies on the m. obturatorius externus and on the m. adductor brevis. It is covered by the course of m. pectineus and m. adductor longus. It innervates the m. pectineus (*diploneural muscle* - it receives a branch from the n. femoralis), the m. adductor longus and the m. gracilis.

- **r. cutaneus** - its sensitive branch for the skin of the lower two-thirds of the medial side of the thigh.

R. posterior nervi obturatorii

Passes dorsally through the m. obturatorius externus to the m. adductor magnus (**diploneural muscle** - a branch from the n. ischiadicus is involved in innervation). It motorically innervates the muscles around which it passes and the m. adductor brevis.

- Along the *a. popliteus*, it sends a descending sensory branch to the knee joint capsule.

N. obturatorius accessorius

It is a **non-constant nerve**. If formed, it is involved in the motor innervation of the m. pectineus and in the sensory innervation of the hip and knee joints.

Damage

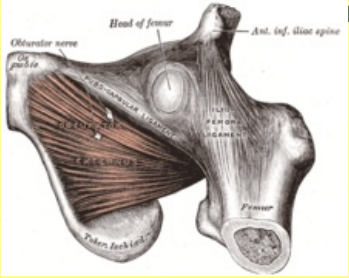
Damage to the n. obturatorius, which can also be caused by pressure from the pregnant uterus, causes:

1. the patient is unable to externally rotate and adduct the thigh - unable to cross the lower limbs;
 2. sensory loss is usually not felt by the patient.
- **Howship-Romberg syndrome** - caused by pressure on the nerve by herniation *in the canalis obturatorius*. The main symptoms are pain shooting into the inner thigh, which the patient feels most at the knee joint.

Links

References used

- ČIHÁK, Radomír. *Anatomie III*. 1. vydání. Praha : Grada, 1997. 672 s. ISBN 80-7169-140-2.



TA A14.2.02.001 (<http://www.unifr.ch/ifaa/Public/EntryPage/TA98%20Tree/Entity%20TA98%20EN/14.2.02.001%20Entity%20TA98%20EN.htm>)

function motor and sensory

branches r. anterior
n. obturatorii,
r. posterior
n. obturatorii,
n. obturatorius accessorius

