The Deep Gluteal Syndrome Therapy Using Ultrasound Imaging

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Case

- A 40-year-old man arrived at our office with right buttock pain(NRS= 9/10) occurred 4 months before.
- He had been working as computer programmer sitting cross-legged for several hours in every day.
- There were no abnormalities in his X-ray and MRI.

Assessment of initial visit.

P=buttock pain

ROM	Flexion	Extension	Abduction	Adduction	Internal rotation (sitting)	External rotation (sitting)
Right	125°	10°	20° P	10°	15°P	40°
Left	125°	10°	40°	10°	40°	45°

• FABER test + +

(with acute pain in his right bottom)

- SLR(65 $^{\circ}$) –
- Dial test –
- Tenderness : right quadratus femoris (QF) right sciatic nerve (SN)



Ultrasound Imaging Anatomy of Quadratus Femoris & Sciatic Nerve

Greater trochanter

G Max

Ischium

G Max

Greater trochanter

probe

QF : quadratus femoris SN : sciatic nerve G Max : Gluteus Maximus

Ischium

SN impingement between Ischium & Greater trochanter



- By ultrasound imaging, posterior impingement of the SN and QF was observed between the ischium and greater trochanter.
- The SN was risen up from the quadratus femoris on the unaffected side. On the affected side, these findings were not present.

Treatment

- Manual soft tissue release between the QF and SN was performed by ultrasound-guided physical therapy (manual therapy).
- Due to the small space between the QF and the SN, an ultrasonic guide was needed to release these structures accurately.



Assessment of 7th time rehabilitation

P=buttock pain

ROM	Flexion	Extension	Abduction	Adduction	Internal rotation (sitting)	External rotation (sitting)
Right (1 st time)	125°	10°	20°P	10°	15° P	40°
Right (7 th time)	125°	10°	40°个	10°	40°个	45°

- FABER test –
- His the buttock pain decreased(NRS=0/10).



Changes in SN Status after 7treatments



• The rising SN from the quadratus femoris have been observed.

Discussion



- The etiology of this case will be adhesion between the QF and SN.
- This will be caused by the pressure of the SN in a cross-legged sitting position for a long time.

External rotation/

Conclusion

 Sitting cross-legged for long durations.

Adhesion between the QF and SN

impingement

• Posterior impingement of both the SN and QF.

Manual, ultrasound-guided therapy was effective for this patient