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Scientific Letter / Bilimsel Mektup

Ultrasound guidance for intrathecal baclofen pump refill

Ultrasonografi rehberliğinde intratekal baklofen pompası dolumu

Berke Aras, Serdar Kesikburun, Emre Adıgüzel, Bilge Yılmaz

Department of Physical Medicine and Rehabilitation, Gülhane Military Medical Academy, Turkish Armed Forces Rehabilitation Center, Ankara, Turkey

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Intrathecal baclofen pumps (ITBP) are commonly used in the management of resistant muscular spasticity and dystonia caused by neurological disorders. The drug must be refilled periodically after implantation to avoid withdrawal symptoms. Although refilling this pump usually can be accomplish by palpation, in some cases such as excess subcutaneous fat due to excessive weight gain, deep/subfascial implantation, pump migration or inversion or scar formation over the reservoir filling port (RFP), the pump cannot be easily palpated. In certain patients, these refills are time consuming and stressful for both the patient and the physician.

Imaging methods such as ultrasound and fluoroscopy can be helpful in ITBP care. Though fluoroscopy identifies the RFP well, radiation exposure and logistical difficulties limit the use of this method.

Ultrasonography is being widely used to help limit procedural complications and allow appropriate localization of anatomic structures. It has long been used to guide needle placement during many interventional procedures due to its advantages of non-invasiveness, ease of availability and lack of radiation exposure.[1] Ultrasound guided filling technique provides a safe and easy mechanism to localize the refill port. The hyperechoic lines of the pump body and the hypoechoic refill port located between the hyperechoic lines can be clearly visualized (Figure 1). Thus, time to pump access, number of maneuvers and post procedure pain decrease and the patients' satisfaction level increases.

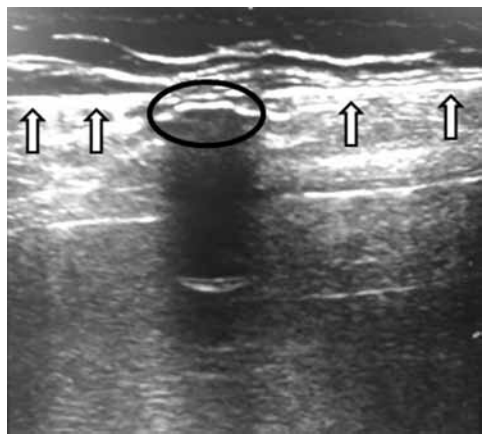

Figure 1. Hyperechoic lines of the pump body (arrows) and hypoechoic refill port (circled) located between the hyperechoic lines can be visualized clearly.

Due to the use of ultrasound guidance along with the other aforementioned reasons, refilling the drug reservoir in difficult cases has become much easier.

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Corresponding author / *İletişim adresi*: Berke Aras, MD. Gülhane Askeri Tıp Akademisi, Türk Silahlı Kuvvetleri Rehabilitasyon Merkezi, Fiziksel Tıp ve Rehabilitasyon Kliniği, 06533 Bilkent, Ankara, Turkey. e-mail / *e-posta*: drberkearas@gmail.com

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