Apad
New approach to the epidural space
APAD

APAD, Acoustic Puncture Assist Device, is a revolutionary device to localise the epidural space by means of an acoustic signal. This device is measuring the pressure in an extension tube between the epidural needle and the syringe placed in a pump. The generated pressure is translated into a corresponding acoustic and visible signal.

The device enables the anesthesiologist to handle the epidural needle with both hands and to detect the epidural space by means of the acoustic signal. The method has been proven to be reliable, safe, and simple in several studies (publications 1, 2, 3, 4).

The benefits of this new epidural puncture technique include: registration and documentation of the epidural puncture, better needle control, certitude that the epidural space has been reached, the free space can be checked and APAD is an outstanding educational tool.

List of publications

Several studies have proven the APAD-procedure to be reliable, safe, and simple. The clinical results have been published in various leading journals. Please inquire for the following articles, for further reference:

1. Lechner, T.J.M. van Wijk M.G.F., Maas A.J.J. Clinical results with a new acoustic device to identify the epidural space. Anaesthesia, 2002;57:768-772


Start of the procedure Two hands needle control APAD confirms finding of the epidural space


Herman Wijffels Innovation Award

The Herman Wijffels Award was instituted as a means for promoting innovative and sustainable enterprise in the Netherlands. In competition with over 250 participants, APAD was evaluated the best innovative product of 2007 and won this most prestigious award.

APAD has the following unique advantages:

- Registration and documentation of the epidural puncture
- Guaranteed finding of the epidural space
- Penetration of the epidural space is indicated by a clear variation of the acoustic signal
- Acoustic monitoring is superior to the sense of touch
- Two handed technique for absolute needle control
- An outstanding educational tool
- Monitoring of the different layers guarantees a safe procedure

Control of the catheter placement  Registration of the puncture  A perfect procedure
QRS is besides a developer and producer of smart accessories which are being used in both pre-hospital and hospital settings, also a distributor of high quality medical devices and supplies. We have a strong network within the Netherlands, as well as internationally through solid international partners. Next to the distribution of our products, we also provide (field) repair service and maintenance. QRS also has specialized itself in the field of disinfection while supplying products to be used in the sterile environment.

QRS consists of five complementary branches which specialized in different medical solutions. We aim for the highest level of support and customer satisfaction by providing top quality products and service. This is reflected in our vision: every patient deserves the best care possible! For this reason we only want to supply products which meet the highest quality standards. Products which perform at the highest possible level like you expect they will do at the most crucial moments.

Our founders and the majority of our staff have a medical background and ample clinical experience. We understand the needs of medical professionals, physicians, nurses and patients in the pre-hospital and in the hospital environment, thus we can provide the best solution to them. Anytime, anywhere, QRS is your partner.

The four main pillars in our processes and of our successes:

**Completeness**
We provide a very complete range of products and services which we are constantly adapting to the needs of our customers. Combining the strength of our five branches, we offer a complete package of medical solutions. This makes us a unique player in the market.

**Innovation**
At home and abroad, we are constantly searching for new and innovative solutions that enable our customers to improve their services to patients.

**Partnership**
In cooperation with the customer, we strive for the best possible result for the patient. We provide advice, develop business cases, and help customers achieving their goals. Because of our approach, we have been able to provide services to a fast growing number of customers since we started more than 10 years ago.

**Entrepreneurship**
In everything what we are doing, we look for “win-win” solutions for both our customers and our suppliers. While being a strong team, we put our customers and partners together while searching for mutual benefits.

The 5 Medical Solutions of QRS:

- **Medical Consumables**
- **Medical Equipment**
- **Service and Maintenance**
- **Facility**
- **Sports Care**