Current Treatment for Brachial Plexus Injury

Nowadays, brachial plexus injury treatments are available in many hospitals all over the world. However, the results are barely satisfactory. Because of the difficulty of treatment, large number of brachial plexus injury patients couldn’t get significant improvement or fully recovery. Ineffective treatments usually result in patients’ dysfunction of limbs, which will finally affect their work and daily life. The children with obstetric brachial plexus palsy even can’t grow up like normal children. As brachial plexus patients usually are not advised to have second operation or invasive therapy, many patients lost their chance of recovery after the first unsuccessful treatment. Therefore, choosing the right treatment & right doctor is crucial for patients with brachial plexus (obstetric brachial plexus palsy).

Symptoms:
Signs and symptoms of a brachial plexus injury can vary greatly, depending on the severity and location of your injury. Usually only one painful upper limbs and shoulders

1- Loss of sensation in upper limbs and shoulders
2- Muscle weakness of upper limbs and shoulders
3- Paralysis of some or all of the muscles of the shoulder and upper limb
4- Heaviness of upper limbs
5- Subluxation of upper limbs
6- Recurrent burners and stingers
7- Neck pain

It's important to be evaluated and treated timely, usually within six to seven months after the injury. Otherwise, the treatment results will not as good as those of timely treatment.

Two Difficult yet Important points for Brachial Plexus Injury Treatment:

1- Brachial plexus root injury

The difficulty of brachial plexus root injury surgery is finding the right proximal connection point, which directly affects the neural signal conduction. Usually, the injured nerve is too short to reconnect, which brings enormous difficulties to the whole treatment. Therefore, it requires the surgeon with rich experience and high skills. Correct connection can speed up the re-growth of the injured nerves. Incorrect neural connection cannot bring any improvement to patient, but also can be a barrier to patient’s recovery.

2- Successful rate of never repair

As we all know, re-growing of the injured nerve is the key step of brachial plexus injury patients’ recovery. Although many surgeons can do the nerve repair surgery by suturing the broken nerves, the success rate of is not satisfying. In other words, many injured nerves were sutured but still don’t work.

First, only correct matching & connection of nerve fibers can make them conduct neural signals again. Any small mistake or negligence may fail the surgery, and the patient may lost the opportunity to gain functional recovery.

Second, epineurium(sheath around the nerve fibers) is very thin and fragile to suture. Improper suturing may break the epineurium, or nerve fibers will puncture the epineurium and eventually lead to neuroma.
In Puhua Hospital, our two outstanding neurosurgeons excellently solved the above two difficulties, and more than 90% of the treated patients benefit from their successful treatment.

Dr Shufeng Wang - World’s leading neurosurgeon for brachial plexus root injury & obstetric brachial plexus palsy

Dr Shufeng Wang, M. D. is a world-renowned neurosurgeon in the treatment of brachial plexus injury. With rich clinical experience, he has treated thousands of brachial plexus injuries (obstetric brachial plexus palsy or birth palsy) patients since 2000, from newborn baby to more than 80 years old man. More than 75% of these patients are severe brachial plexus root injury and more than 40% of them are obstetric brachial plexus palsy. Dr Wang has done a lot researches and made great breakthrough in the reconstruction of hand function of brachial plexus root injury patients. He designed C7 nerve root transfer through the anterior spinal approach in 2001, which shortened the distance of bridging nerve. On the basis of this, he developed another new technique in the surgical treatment of brachial plexus injury, which not only shortened the regenerative distance of nerve fibers but also reduce nerve anastomotic stoma. To help patients to regain more function of their upper limbs, Dr Wang designed another new direct anastomosis in 2005. Currently, his new techniques are gradually spreading to many hospitals in European, Indian, etc. To reduce the high disability rate of obstetric brachial plexus palsy, he first carried out the nerve repair surgery of obstetric brachial plexus palsy in China. For obstetrical brachial plexus palsy with medial rotation contracture deformity and posterior location of shoulder, he designed current best surgical treatment -----release operation through anterior approach of shoulder joints. To solve the difficulties in the diagnosis of brachial plexus root injury, he is the first surgeon studied the function of CTA in the diagnosis of brachial plexus injury. Also, he developed some other new methods for treatment of brachial plexus injury, such as biological therapy, rehabilitation training, etc. Besides, he has published a lot of papers to state his new techniques.

Dr Yanni Li - Director Microsurgery, specializing in nerve repair. Well known for her high successful rate of nerve repair, especially in Brachial Plexus Injury Treatment.

Dr. Li is a Graduate of China’s Top Medical School-- Peking University. She worked in the United States for 17 years (Mayo Clinic, Kleiner Hand Surgery Center and St Mindray Medical Center. The “Yanni knot” (now one of the most common laparoscopic knot methods), was invented by, and named after, Dr. Li. With over 40 years of medical experience, Dr. Li has earned unique understanding in neuroanastomosis. In the face of thousands of all kinds of nerve injury, Dr. Li had given her patients good results. This is profit from her deep knowledge of nerve injury and exquisite microsurgical technique. Her application of neuroanastomosis in brachial plexus treatment has also made great achievement. Since 1970s, Dr Li has already applied the neuroanastomosis into the treatment of brachial plexus injury (obstetric brachial plexus palsy). In 1980s, Dr Li brought this technique to American. Until now, Dr. Li has been working on repairing of brachial plexus and most of her patients get significant improvement and functional recovery.

Some of the papers published by our medical team: