

Dr Teo non-stick bipolars

For minimal invasive keyhole neurosurgery



Who is this guy?

A/Prof. Dr. Charlie Teo

Australian born and trained neurosurgeon

His sub-speciality is pediatric neurosurgery

He is board qualified to practise in the USA and Australia

He worked in USA for 10 years, was Chief of Ped. Neurosurgery in Arkansas

Visiting professor in USA at Stanford, John Hopkins, worldwide in 50 countries

Has published over 30 book chapters, 80 articles

Course director on minimal invasive key hole surgery over 100 times



The Teo bipolars are designed with wider, shorter tips for atraumatic neurosurgery when working deep in the brain in endoscopically-assisted procedures.

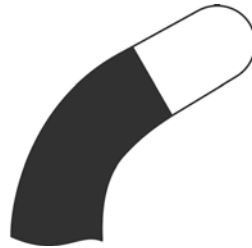
To understand the geometries better, it is important to understand the surgical technique ...

Product Design

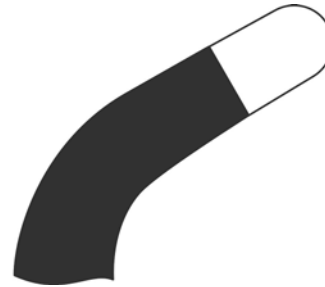


There are 8 forceps in the set.

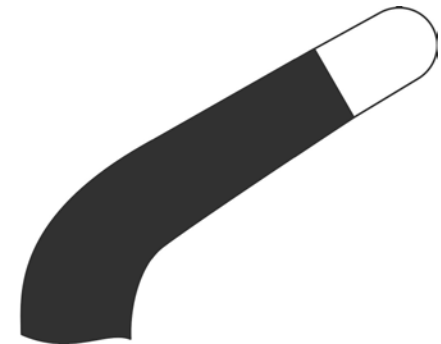
The 3 bipolars with curved tips play a very important role in his surgery



60° angle, 5mm tip



60° angle, 7mm tip



60° angle, 10mm tip

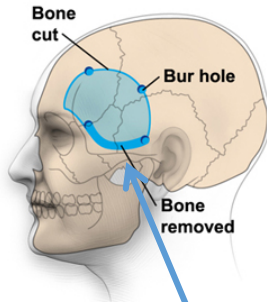
Dr Teo fondly calls them **baby bear, mother bear & father bear**

We call them 783195SG, 783196SG, 783197SG

Keyhole Neurosurgery

Dr Teo compares it with looking into a room through a keyhole of a door

You can get a good view through a very small hole ...



Classic large temporal skin flap/bone flap

Problem: often poor post-op cosmetic results and healing problems due to large incisions and tissue hollowing. Risk of more neural damage.

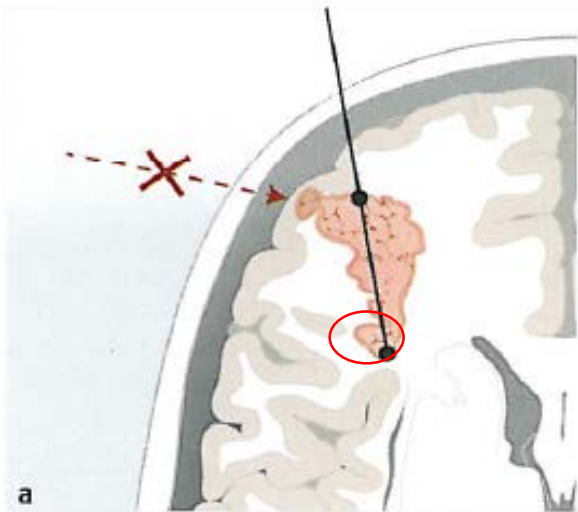
An example of key hole neurosurgery to resect a brain tumor through a small 2 cm burr hole



Angle of Approach

For Charlie Teo the axis of approach is critical ...

... sometimes he doesn't take the short path to the tumor, but follows the „long axis“



Here the shorter path (dotted red line) to the tumor would mean that reaching the most inferior section of tumor would be difficult

Instead he takes the ‚long way‘ following the long axis (black line) to get better access to all of the tumor

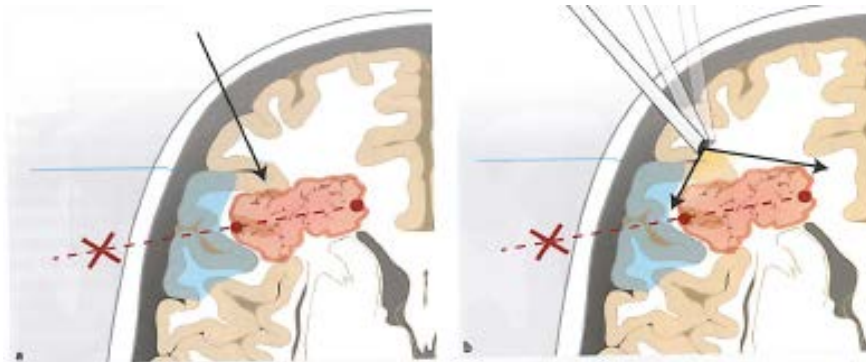
And it is here that when operating around the corner with support of the angled endoscope, the curved Teo bipolars (Baby Bear etc) are used.

Angle of Approach

However ... there are always exceptions ...

Sometimes it is necessary to avoid critical neural structures and then it is better to **not** follow the long axis.

The area shaded in blue is the eloquent cortex (speech)



In this case he goes from superiorly and needs more reach with the bipolars from the center of his access point



He uses mother or father bear

Patient Cosmetics

Not equally important to all neurosurgeons, but important to the patients



One of Dr Teo's tumor patients

Left: directly after surgery. Right: after healing

Key hole neurosurgery is minimally invasive – starting with the skin incision.

The Teo bipolars play an important role in enabling access to remote sections of tumor through a small burr hole.

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One of Dr Teo's tumor patients

Left: directly after surgery. Right: after healing



A tumor patient treated elsewhere

Testimonial



Dr. Charlie Teo says the Sutter SuperGliss non-stick forceps are the best bipolars he has used in 30 years of surgery.

