

Besondere Presseveröffentlichung in



Thursday, June 16, 2005

## Unauthorized medical device keeps soldier alive

**REGENSBURG**, Germany — The aftermath of the explosion that nearly killed Sgt. Chang Wong on May 23 caught up with him quickly, doctors said.

The 22-year-old from Alhambra, Calif., had survived the massive roadside blast that mangled his lower legs and destroyed the tank he was riding in, but the residual effects of the blast quickly overtook him. The bomb sent a shockwave through his body so violent that within a day or two, his lungs began to wilt from the trauma.

In order to save him, doctors in Iraq hooked him up to a new device called an interventional lung assist: a simple, slender box about the size of a portable CD player that performs the work of a lung without the drawbacks of a traditional ventilator.

Plugged into the femoral blood vessels and powered by the patient's own heartbeat, the box provides oxygen to a patient by passing blood through a special membrane, passively doing the work of the damaged organs.

It was just about the only option for keeping Wong alive, said Professor Thomas Bein, an intensive care doctor at the Franz Josef Strauss Universitätsklinikum in Regensburg, and one of the inventors of the device.

"Without this ILA, he never would have left Baghdad," Bein said.

"It really worked," Wong's father, David, said Monday at the hospital, where his son was still in critical care. "It's a miracle for him."

But, technically, it was an illegal one. The circumstances that led to Chang Wong's encounter with the new device were specific and uncommon, said Navy Cmdr. Peter Marcos, a pulmonary critical care physician at Landstuhl Regional Medical Center who treated Wong when he arrived in Germany.

According to a report of the incident, Wong was riding in the turret of an Abrams tank with his unit, the 1st Squadron, 11th Armored Cavalry Regiment from Fort Irwin, Calif., when it ran over a pair of powerful, 155 mm Howitzer shells buried beneath an Iraqi roadside.

Though he avoided taking any shrapnel to the torso, the immense concussion of the blast likely led to the condition that nearly killed him, acute respiratory distress syndrome, Marcos said.

The affliction quickly crippled Wong's lungs in a place where lifesaving options are sometimes limited - a field hospital in Iraq.

So medical personnel used what was at their disposal and plugged an ILA called a Novalung into Wong's bloodstream, simultaneously saving his life and stepping into a gray area of battlefield medicine.

The Novalung, developed at the Regensburg hospital and now available around Europe and in Canada, is so recent an invention that even the top experts on the device (Bein and his colleagues) have only used it on about 100 patients, Bein said.

That makes it too new for the U.S. Food and Drug Administration to approve it for use, doctors said. But according to the manufacturer's director of regulatory affairs, Heiko Frerichs, consumers can still buy the product, making it available for use but, technically, unusable for American doctors.

Frerichs said Novalung has applied for both military and civilian approval, and the FDA is in talks with the Department of Defense to get the product approved on an accelerated schedule for the military.

FDA spokeswoman Julie Sawisza said she could not confirm any dealings with Novalung because the agency is not allowed to comment on internal product discussions or pending approvals.

In the meantime, doctors are braving the ire of the FDA in some cases.

Wong is the third soldier to be evacuated to Germany hooked up to an ILA, said LRMC spokeswoman Marie Shaw. All three have survived so far.



Elizabeth Lien Chu, center, and David Kim Wong, left, stand over their son, Sgt. Chang Wong of the 1st Squadron, 11th Armored Cavalry Regiment, while the recovering soldier receives a special grant of American citizenship Monday at a university hospital in Regensburg, Germany. Wong was sent to the hospital because its staff includes the foremost authorities in a new "external lung" that kept him alive after being wounded by a roadside bomb in Iraq. Col. Mike Davis, a former commander Of Wong's unit, looks on during the ceremony.



Novalung co-inventors Dr. Thomas Bein, center, and Philipp Alois, right, explain to Col. Mike Peters how the small box helps patients with disabled lungs keep oxygen in their blood.

Three weeks after Wong's tank hit the roadside bomb, doctors in Regensburg on Tuesday planned to extract his ventilation tube to hopefully allow the soldier to speak to his parents for the first time since the attack.

If so, he would be doing so as a newly minted American citizen, a status given to him in a special ceremony Monday while the Malaysian native lay unconscious.

But Wong's parents on Monday were still mostly concerned about their son's survival. Both his lower legs have been amputated, and since his arrival at Regensburg, he's developed a severe infection of his fragile lungs from a pathogen he picked up in Iraq.

Just days ago, he was still fighting for life with a high fever and complications from what was essentially advanced pneumonia, Bein said.

But Wong's parents said they were confident about his chances, and reserved their greatest thanks for the people who allowed him to come this far already, especially "the person who invented the second lung," David Wong said.

"It should be used a lot in the military base," he said. "It really can help ... save a lot of people."

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By Ben Murray, Stars and Stripes, Mideast edition, Wednesday, June 15, 2005