

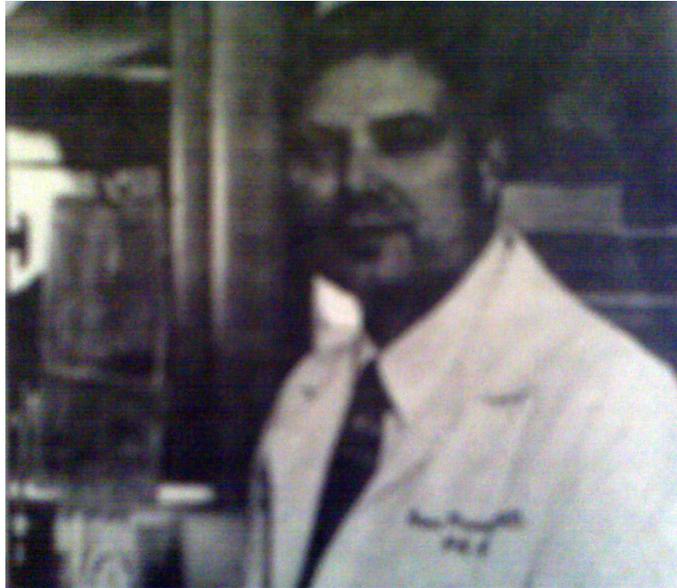
Blood doctor faces challenge of marketing his idea

By Thora Qaddumi

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A Houston-area blood doctor says the “platelet” glue he has developed reduces postoperative bleeding and promotes faster healing of wounds – resulting in shorter hospital stays. Now he faces the challenge of getting surgeons to try it.

James M. Parrish, Ph.D., chief perfusionist at Columbia Bayshore Medical Center in Pasadena, worked for over six years to perfect his method of producing a modified fibrin glue – a combination of platelet-rich plasma from the patient’s own blood and calcium.



The new platelet gel Parrish has developed is significantly different than the fibrin glues previously available, which have been an important tool of surgeons for the past 13 years.

The other fibrin glues use blood from a donor. Parrish has taken the process further by using the patient’s own blood (decreasing the risk of exposure to hepatitis, AIDS, and other viruses) and using centrifugation to concentrate the platelets.

Growth factors are also concentrated. As a result, says Parrish, the platelet gel serves as a glue to prevent bleeding at the time of surgery and actually promotes healing afterwards.

IN THE OPERATING ROOM

At Bayshore, the platelet gel developed by Parrish has been used since April in cardiac surgery, aorto-femoral bypasses, aortic aneurysm repairs, femoral tibial bypasses and split renal repairs.

“Surgeons don’t jump at anything, but our surgeons now don’t want to do a cardiac or vascular case without it,” Parrish says. “We’re developing a database that will give irrefutable evidence of its value. We’ve used it on 130 cases and have seen dramatic results.

“We have eliminated our reliance on blood bank products such as packed red blood cells, platelets and plasma,” he says.

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A Bayshore urologist who recently used the platelet gel in kidney surgery credits it for his patient’s short hospital stay.

“By using the glue,” says Dr. Fouad David, “we were able to cut the usual blood loss of two to three units down to 100 milliliters, speed up the healing process and get the patient out of the hospital in about three days (instead of the usual 10 days for this type of surgery).”

In cardiac surgery, chest tube drainage generally has been reduced to no more than 100 to 300 milliliters, far below the average, Parrish says. Because they’ve had so little postoperative wound bleeding or drainage, renal patients have been discharged the third day after surgery instead of the usual eight days.

SPREADING THE WORD

His immediate goal, says Parrish, is to see the process introduced in the 19 hospitals in the Columbia/HCA Healthcare Corp.’s Houston-area network, which includes the 428-bed Bayshore facility. He hopes that eventually it will have national applications.

Parrish is preparing papers on the use of the platelet gel in specific cases for urology and cardiac surgery professional publications. He is also planning discussions with Medtronic Electromedics Inc., because the process uses the firm’s Elmd-500 machine and his research efforts paralleled those made by the company to create a similar platelet glue.

He developed software to program the machine and has taken out patents on some aspects of the process. Parrish says he did the research “on my own time.” Much was done in San Antonio, where he was the chief of clinical perfusion at Brooke Army Medical Center, before he joined Bayshore in November of 1992.

“The idea of concentrating the platelets came to me in early 1990, when we were performing surgery on a patient with sickle cell anemia,” Parrish recalls. “We used a new process to separate her blood, and we tried using several kinds of fibrin glue, but nothing worked.

I thought of concentrating the platelets and started doing animal studies. The ‘discovery’ really was in 1992 when I got the concentration right.”

