PURIFICATION AND CHARACTERIZATION OF HUMAN PLATELET FACTOR 3. H. Sandberg, L-O. Andersson and S. Hoglund. Research Department, Biochemistry, AB Kabi, Stockholm and Department of Biochemistry, University of Uppsala, Uppsala, Sweden.

In the purification of platelet factor 3 fresh human platelets prepared by centrifugation were used as starting material. Release material having platelet factor 3 activity, as measured by the Stypven time, was obtained by treating the platelet suspension with collagen or thrombin followed by removal of the platelets by centrifugation. Residual platelets left in supernatant were removed by membrane filtration. Purification of platelet factor 3 from the other components in the release material was accomplished by affinity chromatography followed by gel filtration on Sepharose 2B. The gel filtration fraction having platelet factor 3 activity was studied with respect to chemical composition and appearance in electron microscopy. Phospholipids and cholesterol were the main components but small amounts of protein could also be detected. The electron microscopy revealed the presence of numerous membranous particles having diameters between 50-150 Å. The purified fraction was used for immunization of rabbits and an antiserum was obtained which inhibited the platelet factor 3 activity.

HEMOSTASIS IN THE ORAL CAVITY. D. TOMIC. Munich, West Germany.

Various factors and reasons can be responsible for acute, severe or protracted hemorrhages in the oral cavity. Hemostasis with conventional methods frequently poses a difficult, dangerous and involved problem. A special method is developed utilizing the chemical and physical properties of inorganic and organic compounds, and this is found to be efficient for rapid and safe hemostasis. It acts on the blood coagulation process by lowering the pH value of blood, as well as by its astringent and osmotic properties. Altogether, the result is hemostasis and favorable wound healing. With the use of bone cement, the initial clot is physically protected, thus contributing more to reliable hemostasis, particularly after dental extraction. The method used, that is, bone cement in combination with the developed hemostatic agent, can be used without additional treatment for severe primary, as well as secondary hemorrhages. Patients suffering from hemophilia and other disorders of blood coagulation were treated successfully.

FUROSEMIDE, FIBRINOLYTIC ACTIVITY AND UROKINASE EXCRETION. I.S.Chohan*, I.Singh*, J.Vermeylen** and M.Verstraete**. *Directorate General Armed Forces Medical Services, New Delhi, India and **Laboratory of Blood Coagulation, University of Leuven, Leuven, Belgium.

Plasma fibrinolytic activity, as measured by the fibrin-plate method, is enhanced after an intravenous injection of 40 mg furosemide. The effect is evident within 30 minutes of the injection and attains a peak after 6 hours. If a second injection of furosemide is given at this stage, the increased fibrinolytic activity persists, and a slightly higher peak than the first is obtained again 6 hours after this injection. After the furosemide injection, there is an initial decrease of urokinase excretion which returns to normal after 3 to 6 hours.

The decrease of urokinase excretion is attributed to a dilution effect during increased diuresis and the rise in fibrinolytic activity by furosemide is attributed to its vasodilatory activity and cyclic-AMP phosphodiesterase inhibitory capacity. It also appears related to the Hageman factor dependent pathway of fibrinolysis. In the treatment of high altitude pulmonary oedema, furosemide restores factor XII and fibrinolytic activity, which are both depressed in this disease (I.Singh and I.S. Chohan, Int.J.Biometeor.18,33,1974).