

## Poster 5:

### Platelet Rich Fibrin (PRF) for hard to heal ulcers in patients with diabetic feet.

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Platelets play two important roles in wound healing: hemostasis and initiation of wound healing. After platelet activation and clot formation, growth factors are released. In ordinary blood, the number of platelets is  $0.2 \times 10^6/\text{ul}$ . In contrast, it is  $>1.0 \times 10^6/\text{ul}$  in platelet-rich plasma.

Autologous growth factors from concentrated platelet suspensions have been used to treat wounds for years. The use of platelet-derived wound healing formulae delivered in a crystalline collagen carrier was first published in 1986.

The Vivostat® System is a medical device for the preparation of an autologous fibrin sealant from 120ml of the patient's blood. The system is fully automated and microprocessor controlled and is made up of three components: an automated processor unit, an automated applicator unit, and a disposable, single-patient-use unit, which includes a preparation set and a Spraypen applicator.

This pilot study of very hard-to-heal ulcers investigated whether treatment with autologous platelet-rich fibrin is feasible and to see if wound healing is improved. We would like to discuss our results of application of PRF (Vivostat PRF, Birkerød, Denmark) in 8 treated patients with a diabetic foot ulcer.

Between September 2006 and November 2007 we recruited 18 patients with chronic, hard to heal ulcers. All wounds were located on the lower limb. In our population of 18 patients, there were 8 patients with a diabetic foot ulcer. 9 wounds were included in this study. (One of the patients had 2 wounds on the lower limb which were treated simultaneously). The population consisted of 6 males and 2 females with a mean age of 55.3 years. (range 38-70). The mean wound duration before treatment was 7.5 months (range 1-24).

The patients received a total of 23 treatments. In total, with a short follow up, (1-24 months), over 60% of the wounds have closed. 2 wounds were smaller than 1/3 of the initial size, although these are estimates only.