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### **Pump upgrade for machine perfusion at the Freeman Hospital in Newcastle**

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Sir: Machine perfusion has tremendous scope for local development, as cited in the article by Balupuri [1]. This article describes the set-up of a system based on old dialysis pumps (Bellco) at the Freeman Hospital, Newcastle.

We would like to report that since submitting this article we have upgraded the Newcastle hypothermic

machine perfusion system. The Bellco BL 760 / 760 N pump has been replaced by a Hospal BSM-22sc pump. As with the Bellco-, the Hospal pump provides a peristaltic flow for machine perfusion of NHBD kidneys in "single needle" setting. The Hospal BSM-22sc pump has two pumps in series, a venous limb for drawing up perfusate fluid from the organ chamber & an arterial limb for perfusate delivery via a renal perfusion clamp (Waters Medical Systems).

The Hospal BSM-22sc pump continues to be used in haemodialysis in our centre. This pump provides a digital reading of flow for different dial settings. The Hospal BSM-22sc pump was systematically calibrated for 500 ml of Newcastle modified UW solution.

To date we have machine-perfused 9 pairs of NHBD kidneys since conversion to the Hospal BSM-22sc pump. Since the change of pumps,

there has been little need for service & maintenance beyond the initial testing & learning phase. The Hospal BSM-22sc with the adjacent heat exchanger continues to provide 4–8°C perfusate to the NHBD kidney.

### **References**

1. S Balupuri, A Strong, N Hoernich, C Snowden, MAS Mohamed, D Manas, J Kirby, D Talbot (2001) Machine perfusion for kidneys: how to do it at minimal cost. *Transpl Int* 14: 103–107

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