

**REACTION TO PROTAMINE SULPHATE USED TO REVERSE HEPARINISATION IN  
VASCULAR SURGERY**

The Council has had one report of a severe reaction to protamine sulphate used to reverse the effects of heparin in a patient having vascular surgery. A short statement has been made by the Council about this issue and the importance of the rare complication of an anaphylactic reaction to protamine sulphate.

A case was reported to the VSCC about a patient undergoing ilio-femoral endarterectomy. Heparin had been employed as an anticoagulant and this was reversed with protamine sulphate. The patient became hypotensive and developed an arrhythmia followed by acute myocardial infarction and died on the table.

Comment:

Protamine sulphate may cause catastrophic pulmonary hypertension and systemic hypotension, particularly if a large dose has been administered rapidly and if there has been previous exposure. It is not uncommonly encountered in cardiac surgery where larger doses are employed.

Sensitivity reactions may be related to histamine release where there has been rapid injection and rare cases of anaphylaxis to the drug have also been reported.

The risk is minimised by very slow IV injection and careful titration of the dose needed to counteract the anticoagulant.