

## HPA recommendation on the treatment and prophylaxis of tetanus

### Background

During the recent shortage in the supply of tetanus immunoglobulin (TIG) the supply of TIG has been restricted to patients requiring treatment for suspected tetanus. Individuals with tetanus prone wounds have been unable to receive TIG prophylaxis and have had to rely on tetanus boosters and antibiotics at the time of injury. In addition, the supply of TIG limited for treatment was in an intramuscular format and therefore, the volume required (around 30mls) could not be given without causing major discomfort.

After discussions with BPL, it became apparent that normal preparations of immunoglobulin (for IV and sub-cutaneous use) contained reasonable levels of tetanus antibody when measured by ELISA. We therefore arranged for current batches of two products Subgam (the human normal immunoglobulin preparation suitable for IM or SC use) and Vigam (human normal immunoglobulin preparation suitable for IV use) to be measured for levels of tetanus antibodies by ELISA and in vivo to determine if it would be a suitable alternative should the current stock shortage continue.

### Results

The testing was performed at the National Institute for Biological Standards and Control revealed a good correlation between ELISA and in vivo Toxin Neutralising Test (TNT) anti-toxin assays. The following levels can be used to estimate the equivalent doses of normal immunoglobulin to achieve the recommended dose of tetanus anti-toxin:

#### Results from Tetanus Antitoxin assays for Human Normal Immunoglobulin

Batch number	Product	ELISA iu/ml	TNT assay iu/ml
SCBN7647	Subgam	63	57 (48-69)
SCBN7651	Subgam	64	57 (48-69)
VLAN7724	Vigam	23	26 (18-46)
VLAN7759	Vigam	20	18 (15-22)
VLAN7730	Vigam	23	21 (18-26)

### Recommendation

The HPA therefore recommends that if hospitals can source suitable stocks of tetanus specific immunoglobulin this should be used for the treatment of tetanus and the prophylaxis of tetanus prone wounds. Where suitable TIG stock cannot be sourced, the HPA recommends that human normal immunoglobulin for intravenous use (Vigam) may be used as an alternative for treatment of clinical tetanus. The volume of Vigam required to achieve the recommended treatment dose of 5,000-10,000 iu will be approximately 250 to 500mls. This can be infused over a period of 3-6 hours.

For tetanus prone wounds requiring TIG, human normal immunoglobulin for subcutaneous use (Subgam) may be given intramuscularly as an alternative. The volume of Subgam required to achieve the recommended dose of 250iu will be approximately 5mls.

Trusts should contact BPL as appropriate for the supply (020 8258 2342).

Mary Ramsay, Rob George, HPA Centre for Infections  
Thea Sesardic, National Institute for Biological Standards and Control

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