

AN UNEXPECTED COMPLICATION OF DVT PROPHYLAXIS

A. R. J. MANKTELOW, F. S. HADDAD, D. P. POWLES

We report a case in which a complication of routine chemoprophylaxis with subcutaneous low-molecular-weight heparin led to the postponement of a total hip replacement. This unusual reaction reinforces the current debate regarding the use of chemoprophylaxis for joint replacement surgery.

Keywords : complication ; deep venous thrombosis ; prophylaxis.

Mots-clés : complication ; thrombose veineuse profonde ; prophylaxie.

INTRODUCTION

Thromboembolic disease remains a significant complication of hip replacement surgery (6). Most orthopedic departments prescribe some form of chemical or mechanical prophylaxis. Chemoprophylaxis with subcutaneous low-molecular-weight heparins has recently increased in popularity (3, 4, 7). We report a case in which a complication of routine chemoprophylaxis with subcutaneous low-molecular-weight heparin led to the postponement of a total hip replacement.

CASE REPORT

A previously fit 67-year-old lady was admitted for a total hip replacement. Twelve hours pre-operatively she was given a subcutaneous injection of low-molecular-weight heparin (enoxaparin 40 mg*) into her lower anterior abdominal wall. Immediately afterwards the injection site began to bleed. A steady ooze continued overnight des-

pite local pressure dressings. By the next morning several dressing pads had been soaked through with blood, and the puncture site continued to bleed freely when direct pressure was removed. As a result of this unexpected bleeding, her operation was cancelled. The bleeding stopped later that afternoon without further intervention.

She was referred for hematological assessment, which showed a normal full blood count, clotting screen and bleeding time. In addition she was shown to have normal liver and renal function.

In the past she had had no abnormal bleeding following dental procedures or a hemorrhoidectomy. She had not noticed any abnormal bruising or cutaneous stigmata. She was on no regular medication with the exception of intermittent non-steroidal antiinflammatory drugs which she had not taken for several days prior to admission.

Two weeks later, in the light of the above investigations, she was readmitted and rechallenged with Clexane. There were no local complications, and she underwent a total hip replacement from which she made an uneventful recovery.

DISCUSSION

The commonest side-effect of low-molecular-weight heparin is bleeding (2). This can result from exceeding the necessary dose or more rarely from heparin induced thrombocytopenia (2). Neither

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* Clexane® Rhone-Poulenc Rorer, Eastbourne, UK.

would appear to have occurred in this case. The recommendations issued by the manufacturers (5) for the administration of Clexane® which are designed to minimize local complications, were followed. Rhone-Poulenc Rorer's Worldwide Pharmacovigilance database contains only two other reports of bleeding from injection sites; in one of these, the patient was on long-term chemoprophylaxis and in the other, the patient was also taking aspirin.

The fact that subsequent rechallenge with Clexane® led to no further complications suggests that this was not an idiosyncratic reaction. It is far more likely that the injection was inadvertently made into an invisible superficial vein. As there was no way of predicting this, this complication illustrates another potential ill effect of chemoprophylaxis. In this case there were significant financial implications for the orthopedic department with the wastage of ward and operating room time. In addition the psychological and emotional effects on the patient cannot be underestimated.

As the arguments continue to rage with regard to the use of chemoprophylaxis in joint replacement surgery (1), we report a rare but significant local complication to fuel the fire.

REFERENCES

1. Bulstrode C. J. K. Orthopaedic and trauma surgery. *Brit. Med. J.*, 1995, 310, 917-919.
2. Demasi R., Bode A. P., Knupp C., Bogey M., Powell S. Heparin-induced thrombocytopenia. *American Surgeon*, 1994, 60, 26-29.
3. Leyvraz P. F., Bachmann F., Hoek J., Buller H. R., Postel M., Samama M. *et al.* Prevention of deep vein thrombosis after hip replacement; randomised comparison between unfractionated heparin and low-molecular-weight heparin. *Brit. Med. J.*, 1991, 303, 543-8.
4. Planes A., Vochelle N., Fagola M., Feret J., Belland M. Prevention of deep vein thrombosis after total hip replacement. The effect of low-molecular-weight heparin with

spinal and general anaesthesia. *J. Bone Joint Surg.*, 1991, 73-B, 418-22.

5. Rhone-Poulenc Rorer. Once daily S. C. Clexane: Simple administration.
6. Thromboembolic Risk Factors (THRIFT) Consensus Group. Risk of and prophylaxis for venous thromboembolism in hospital patients. *Brit. Med. J.*, 1992, 305, 567-74.
7. Torholm C., Broeng L., Jorgensen P. S., Bjerregaard P., Josephson L., Jurgensen P. K. *et al.* Thromboprophylaxis by low-molecular-weight heparin in elective hip surgery: a placebo controlled study. *J. Bone Joint Surg.*, 1991, 73-B, 434-8.

SAMENVATTING

A. R. J. MANKTELOW, F. S. HADDAD, D. P. POWLES. Onverwachte complicatie van een DVT prophylaxis.

De auteurs rapporteren een geval waar een complicatie van een routine chemoprophylaxis met subcutane heparine met laag moleculair gewicht aanleiding gaf tot het uitstel van een totale heuparthroplastiek. Deze ongewone reactie is een element in het debat over het gebruik van chemoprophylaxie bij gewrichtsarthroplastiek.

RÉSUMÉ

A. R. J. MANKTELOW, F. S. HADDAD, D. P. POWLES. Complication inattendue de la prophylaxie thrombo-embolique.

Les auteurs présentent un cas de complication au cours d'une chimioprophylaxie de routine par héparine sous-cutanée de faible poids moléculaire, qui fit différer une arthroplastie totale de hanche. Cette réaction inhabituelle est un élément à verser au dossier du débat concernant la chimioprophylaxie systématique avant, pendant et après la chirurgie de remplacement articulaire.