syndrome as high as 12% falling to 0.6% when the surgeon is aware the patient has used tamsulosin.

As cataracts and the use of alpha$_1$ adrenergic antagonists increase with age, it is not surprising that the incidence of intraoperative floppy iris syndrome has been reported to occur in up to 3.7% of cataract surgeries. It is important that the ophthalmologist should seek the history of tamsulosin intake. Preoperative cessation of the drug is not currently recommended. With recognition of the potential problem and careful pre-and intraoperative planning, the ophthalmologist can minimise surgical complications associated with intraoperative floppy iris syndrome.

Chlorhexidine mouthwash

Chlorhexidine gluconate has broad spectrum antimicrobial activity. It is currently the most effective mouthwash for reducing plaque and gingivitis. Use of chlorhexidine is not associated with development of resistant organisms. As chlorhexidine may interact with fluoride and sodium lauryl sulfate (a detergent found in toothpastes), it should be used after rinsing with water or 0.5–2 hours after using toothpaste.

Current recommendations are for twice-daily chlorhexidine to be used only as a short-term adjunct, or as an aid in disinfection of surgical sites, to improve wound healing, or as a short-term treatment of halitosis. It is not recommended for long-term use due to its numerous adverse effects. These include tooth and restoration staining, soft tissue staining, increased calculus deposition, unpleasant taste, taste alteration, burning sensation, desquamation and mucosal irritation. Chlorhexidine may also potentiate oral discomfort in patients with chemotherapy-induced mucositis, xerostomia or ulcerative oral mucosal conditions.

Drug Committee, TUTH

The Drug Committee has met seven times since it has been re-constituted in Poush 2065. The committee has discussed various issues in improving hospital pharmacy services and added four companies to the list of manufacturers. The list now contains 171 companies for procurement of drugs in TUTH. The committee also identified companies for procurement of non-drug items in the hospital. The companies were decided on the recommendations of various departments of the hospital.

"Drug and Therapeutics Letter" is also available in the following webite: http://www.teachinghospital.org.np/diu.html, http://www.iom.edu.np/diu.html

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Flying and thromboembolism

Introduction

Deep vein thrombosis and pulmonary embolism related to air travel are a cause of concern.The risk of venous thromboembolism is influenced by the conditions prevailing during flight, and the passenger's inherent predisposition to develop venous thrombosis.

Factors implicated in increasing the risk of venous thromboembolism include the duration of the flight and the prothrombotic situation created by venous stasis in the lower limbs. This stasis has been attributed to prolonged immobilisation, obstruction of venous return by compression of lower limb veins and as part of a general reduction in blood flow due to in-flight dehydration. In view of the cramped conditions the problem has been called 'economy class syndrome', but this is probably a misnomer.

Features of the individual traveller associated with an increase in risk of venous thromboembolism include certain physical attributes, female gender, oral contraceptive use, inherited or acquired states that predispose to venous thromboembolism, and a previous history of venous thromboembolism.

Coexisting medical conditions which also increase the risk of venous thromboembolism include active cancer and congestive cardiac failure.These features help to determine a traveller's risk of developing venous thromboembolism.

Risk of venous thromboembolism in healthy travellers

The increase in the risk of developing clinically significant venous thromboembolism is very low in flights of less than about four hours or 4000 km. After four hours the risk increases progressively with increasing flight duration. The average increase in incidence of venous thromboembolism relative to not undertaking a flight is about one event per 4500 passenger flights in excess of four hours. Thromboembolism is therefore a relatively uncommon event in healthy travellers on long-haul flights.

Most clinically significant events occur at the end of a long-haul flight or soon afterwards, with the incidence falling to baseline levels after about 2–4 weeks. People who have to take several long-

haul flights increase their risk of thromboembolism.

The risk does not increase as much in older healthy people as would be expected from the trend normally associated with increasing age.

Thromboembolism is more likely to occur in association with prolonged immobility, above normal body mass index, and short stature. These physical characteristics have the potential to reduce venous return from the legs although venous stasis is yet to be confirmed under flight conditions. In another survey, obesity and window seating were associated with increased venous thromboembolism risk, in keeping with the likelihood of reduced mobility in those seats.

Prophylaxis in low-risk travellers

While regular walks around the cabin during long-haul flights could be expected to avert the risk conferred by prolonged lower limb venous stasis, restrictions imposed by blockages in the aisle and by immobility during sleep make this impractical. It remains to be proved that performing the airlines' currently recommended leg exercises while seated will be beneficial during long-haul flights. However, a study under controlled conditions on the ground found that vigorous ankle flexion with feet against resistance causes prompt recovery of lower limb venous return after prolonged immobility.

Antiplatelet drugs such as aspirin, or anticoagulants such as low molecular weight heparin or warfarin, have not been proven to be of benefit in reducing the incidence of venous thromboembolism in low-risk travellers. These drugs can induce bleeding so they are not recommended in this population. The known risk of adverse effects outweighs the chance of possible benefit.

Factors conferring moderate to high risk

Factors associated with a moderate to high risk of venous thromboembolism during or soon after long-haul flights include oral contraceptive use, inherited thrombostatic states, previous venous thromboembolism, recent surgery, congestive cardiac failure. Pulmonary embolism is associated with high-risk factors such as previous venous thromboembolism, active cancer and heart failure, many cases occur in patients who only have moderate risk factors. These factors closely resemble those that confer an increased risk of venous thromboembolism under different circumstances, such as surgery or prolonged immobility in bed-bound patients. It is therefore reasonable to consider that the pathogenesis of flight-related venous thromboembolism is similar to venous thromboembolism in other situations. If the person is at high risk of thromboembolism on the ground, they will be at a greater risk during a long-haul flight. Under these circumstances the benefit of anticoagulant prophylaxis may outweigh the risk of adverse effects.

Prophylaxis in high-risk travellers

Travellers at high risk of venous thromboembolism are candidates for anticoagulant prophylaxis during the period of increased risk imposed by lengthy air travel.Those at particular risk include, for example, passengers with a history of venous thromboembolism, active cancer or recent surgery, especially orthopaedic surgery to the lower limbs. There is no evidence that aspirin protects against venous thromboembolism. Either subcutaneous low molecular weight heparin or oral warfarin reduces the risk of venous thromboembolism. Low molecular weight heparin injected immediately before flight, in the recommended dose for prophylaxis in high-risk settings, is considerably more convenient than anticoagulation with warfarin.

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Brief Information

Tamsulosin-induced intraoperative floppy iris syndrome during cataract surgery

Intraoperative floppy iris syndrome is a condition characterised by:

- poor preoperative pupil dilation
- a floppy iris with a propensity to billow and prolapse from surgical wounds
- progressive intraoperative miosis.

A floppy iris makes cataract surgery more difficult, with a higher incidence of complications including posterior capsular rupture, vitreous loss and iris trauma.

Intraoperative floppy iris syndrome has most commonly been associated with tamsulosin, a selective alpha$_1$ adrenergic antagonist used for relief of lower urinary tract symptoms associated with benign prostatic hypertrophy. Between 40% and 90% of patients on tamsulosin develop intraoperative floppy iris syndrome. Tamsulosin has also been associated with a 2.3 times increased postoperative cataract complication rate. Other less selective alpha$_1$ adrenergic antagonists including terazosin and prazosin have also been implicated. Although it can occur without use of alpha$_1$ adrenergic antagonists, no statistically significant association has been found between intraoperative floppy iris syndrome and other medications or disease.

The most important factor governing cataract surgery outcomes in patients on an alpha$_1$ adrenergic antagonist is recognition of its ability to induce intraoperative floppy iris syndrome. The astute surgeon can then plan a suitable management approach. Some studies have shown intraoperative cataract complication rates (posterior capsular rupture with vitreous loss) with undiagnosed intraoperative floppy iris