Results from the ESSKA Survey on Prophylaxis for venous thromboembolism (VTE) in Hip Arthroscopy

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Venous Thromboembolism (VTE) is a major cause, but preventable, for morbidity after orthopedic surgery [1-2]. Although the problem is well-documented for major or more invasive procedures, we are still unclear about both incidence and prevention of deep venous thrombosis (DVT) and pulmonary embolism (PE) after arthroscopy in general, and hip arthroscopy (HA) in particular.

Hip Arthroscopy (Fig.1) is often a long procedure, partially performed in traction, and requiring a variable period of restricted weight bearing. Mohtadi [3] reports an incidence of 4.4% DVT in cases completed with no DVT prophylaxis. Other studies report even lower incidence rates, ranging from 1.4 to 3.7% [4-6]. Pulmonary Embolism after HA has been sporadically reported in literature [7-10].

In this scenario, there is still no consensus about any aspect of prophylaxis. As with many other arthroscopic procedures, the CHEST guidelines [11] provide no specific recommendations. Some suggestions came from the Italian intersociety consensus statement on anti-thrombotic prophylaxis in orthopedics [12]. Subsequently, ESSKA’s new Hip Arthroscopy Committee decided to address the problem with a survey of ESSKA Members (www.esska.org/page/Surveys).

The survey was created by a focus group of high-level hip arthroscopists, and pre-tested to ensure validity. Members from 29 different counties, from Austria to Ukraine and the USA, answered this survey. About half of the respondents had five-or-more years of experience in HA, and completed 50+ procedures per year. More than 73% agreed that VTE prophylaxis is an important clinical consideration in hip arthroscopy.

Asked for the rate of DVT after HA in their clinical experience, the respondents answered with results very similar to the published figures. The respondents answered as follows: less than 1% DVT for 37% of the respondents, between 1% and 2% for 10% of respondents, and between 3% and 5% for another 4%. Twenty-nine percent of the respondents had never experienced any DVT on HA patients. For 20% this data was unknown.

Pulmonary Embolism is obviously less common and referred to as “not-experienced” by 58% of respondents. For 29% PE has been experienced with a range from < 0.1% (mostly) to 0.5%.

Sixty percent of the respondents prescribed VTE prophylaxis almost routinely to their patients, whilst 40% adopted prophylaxis for less than half of their patients. Only 5% of the respondents never prescribed DVT prophylaxis.

Most of the respondents who do not routinely administer systematic VTE prophylaxis considered the following as risk factors, when prescribing prophylaxis: a history of previous VTE or family history for VTE; known genetic disorders and/or the use of oral contraceptives. Smoking habits, a
longer/complicated procedure and, interestingly, post-operative reduced weight-bearing were all regarded as less important risk-factors.

Great variability was demonstrated in the responses of our colleagues when asked about the duration of DVT prophylaxis. Their responses ranged from less than 7 days, to 35 days, 70% of the respondents preferring a 7-15-day period. Only 15% of the respondents extended the duration of prophylaxis according to weight-bearing restrictions.

When prescribed, the vast majority (98%) of the respondents preferred pharmacological (69%) or combined prophylaxis (29%). Only 2% of the respondents preferred mechanical prophylaxis only.

As for first choice drug for pharmacological prophylaxis, low molecular weight heparin (LMWH) was the commonest (79%). Other prescriptions included Acetylsalicylic acid (6%), Vitamin K antagonists (2%) and the new oral anticoagulants (13%). Furthermore, new oral anticoagulants were used as second choice by 33% of respondents.

With regard to mechanical prophylaxis, most respondents (78%) preferred graduated compression stockings (GCS) alone (69%), or combined with intermittent pneumatic compression (IPC) devices (9%). IPCs alone were favoured by 16% of the respondents.

The potential for complications with the use of pharmacological or mechanical prophylaxis was considered “a concern” by 49% of respondents. However, 33% disagreed or strongly disagreed, and 18% were neutral about this. Not surprisingly, bleeding was the main complication of concern (66%), which influenced the choice of prophylaxis. Costings (of the prophylaxis), however, were a concern for only 26% of respondents.

The results of this survey confirm that a general agreement on the indications, duration and type of prophylaxis for venous thromboembolism in hip arthroscopy is needed. There seems to be a trend towards the use of LMWH, especially on those patients with known risk factors, for a 1-2-week period.

We feel that a consensus statement on this topic is important, and that a common direction in the prophylaxis of our HA patients would be beneficial.

As such, we hope to achieve this for ESSKA’s Congress in Glasgow.


Figure 1 An Arthroscopic view, in traction, of the central compartment. Aggressive synovitis on the acetabular fossa.