Aim:

The National Institute for Health and Care Excellence (NICE) guidelines recommend repeating compression ultrasound (USS) within 6-8 days in patients with suspected lower limb deep vein thrombosis (DVT) who have a “likely” 2-level Wells score and a negative first USS with positive D-Dimer test. Intravenous drug users (IVDUs) score 1 more point on the Wells score. A meta-analysis suggests that pooled sensitivity of various ultrasound techniques is 94.2%. However, there is no study that reported sensitivity of USS in IVDUs. Our study aims to determine this sensitivity in our institution.

Methods:

A retrospective analysis of medical records of 43 consecutive IVDUs who presented to ambulatory care unit with suspected lower limb DVT over 1 year. D Dimer test results were obtained from the online laboratory system which uses a rapid ELISA D Dimer testing with results reported as either positive or negative.

Results:

Figure 1 shows the study flowchart. 40 Patients were current and 3 were past intravenous drug users. All the 3 past users had a new clot on the first USS. A total of 31 (72%) had a new DVT on the first scan, and 1 had an old thrombus. Of the remaining 11, 5 patients received a second USS, 4 of which revealed a new DVT. 2 Of the 6 patients who had no repeat scan had a DVT in 3 months follow up. The calculated sensitivity for USS in IVDUs would be:

\[
\text{Sensitivity} = \frac{31(\text{True Positive})}{(31(\text{True Positive}) + 6(\text{False Negative}))} = 83.7\%
\]

Conclusion:

Most IVDUs who present with symptoms and signs of lower limb DVT test positive on their first USS, and most patients who have a negative scan have a missed DVT and would warrant a repeat scan. It is a safe approach to repeat USS on all intravenous drug users who have a negative first scan.

References: